University of Scranton

...in the Pocono Northeast

College of Arts and Sciences 1981/1982
School of Management

UNIVERSITY OF SCRANTON
COLLEGE OF ARTS AND SCIENCES
SCHOOL OF MANAGEMENT
CALENDAR 1981-1982

FALL SEMESTER
1981

August 30-September 1 (Sun-Tues)	Freshman Orientation
September 2 (Wed)	Classes Begin
September 7 (Mon)	No Classes—Labor Day
October 14 (Wed)	End of First Quarter
October 19 (Mon)	No Classes
November 25 (Wed)	Thanksgiving Holidays Begin After Last Class
November 30 (Mon)	Classes Resume
December 14-22 (Mon-Tues)	Semester Exams
December 22 (Tues)	Christmas Recess Begins After Last Exam

INTERSESSION
JANUARY 1982

January 4 (Mon)	Classes Begin
January 28 (Thurs)	Study Day—No Classes
January 29-30 (Fri-Sat)	Final Examinations

SPRING SEMESTER
1982

February 3 (Wed)	Classes Begin
March 17 (Wed)	End of Third Quarter
March 19 (Fri)	No Classes
April 7 (Wed)	Easter Holidays Begin After Last Class
April 13 (Tues)	Classes Resume
April 28 (Wed)	Frank O'Hara Day
May 17-26 (Mon-Wed)	Final Examinations
May 30 (Sun)	Commencement

SUMMER SCHOOL
1982

1st Session		*2nd Session*
June 2 (Wed)	Classes Begin	July 12 (Mon)
June 11 (Fri)	No Classes	July 23 (Fri)
June 25 (Fri)	No Classes	August 6 (Fri)
July 2 (Fri)	No Classes	August 13 (Fri)
July 7 (Wed)	No Classes	
July 8-9 (Thurs-Fri)	Final Examinations	August 16-17 (Mon-Tues)

University of Scranton
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University of Scranton

A Jesuit and Coeducational Institution

1981/1982

Volume 66, Number 4

August 31, 1981

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UNIVERSITY
OF
SCRANTON

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what the university brings to the student

WHAT THE UNIVERSITY BRINGS TO THE STUDENT

In an era when higher education is characterized by public institutions often of 40,000 students or more, the University of Scranton is a private, independent liberal arts institution of 4,500 students.

At a time when students on many campuses are herded into the anonymity of 300-seat auditoriums and lecture halls, the largest classroom at the University of Scranton only exceptionally seats more than sixty persons. At Scranton the accent is on community and communication—not anonymity.

At a time when many private schools are experiencing a decline in enrollment, the undergraduate colleges at the University of Scranton have enjoyed a 100 percent growth in student enrollment over the last ten years. It is one of the fastest growing private institutions in America.

At a moment when teaching in the multiversities has often been abandoned to graduate students, at the University of Scranton the faculty teaches. At Scranton, teaching, and great teaching at that, holds primacy.

But even more fundamentally, the crisis on American college campuses as in American society in recent years concerns the question of values. Students charge that American educational institutions have no values. The universities are silent—not only on the issues of the hour, but on the enduring issues as well.

Much of what follows in this bulletin attempts to convey by word and image that the University of Scranton does indeed possess its own values and to indicate to you what these values are. We prefer to fly our colors.

HERITAGE AND VALUES

The University is changing. In response to historical events and educational developments we are in the process of becoming a different institution from what we were last semester or last year. But every university, if it is to be great, must have a heritage to share with those who come to her.

The University, since its 1888 founding by the Christian Brothers, has stood in the Catholic tradition, bringing to its students the educational heritage of the oldest continuous institution in the western world. From the 12th century ecclesiastical foundation of the universities of Paris and Oxford to the more recent establishment of the Catholic University of America (1887), this tradition continues in the University of Scranton.

Beyond this, the University stands in the Jesuit tradition, one of the youngest of 60 universities administered by the Jesuits throughout the world. From the establishment of the Gregorian University in Rome (1551), to the founding of Georgetown College in the Federal City at the time of the adoption of the Constitution (1789), to the coming of the Jesuits to the University of Scranton in 1942, this tradition has signified academic excellence and Christian humanism.

William J. Byron, S.J., Ph.D., President of the University and Professor of Economics

GOALS

1. The University of Scranton is a **Catholic, Jesuit** college in the **liberal** arts tradition, serving primarily undergraduate men and women. Its emphasis on undergraduate education does not preclude the establishment and encouragement of appropriate graduate programs so long as those programs are extensions of and congenial to the basic undergraduate commitment.

2. Historically, this Catholic University has served the population of the city of Scranton and its surrounding area. While retaining its basic commitment to the area in which it has roots, the University now includes in its declared purpose the intention of building and retaining, in addition to the flow of commuter students from the metropolitan area, an on-campus resident population of students from areas well beyond the city of Scranton, including areas well beyond the borders of the United States. Moreover the University does not intend to serve Roman Catholics in any exclusionary sense, but rather to provide Catholic education in a properly ecumenical sense for students from a variety of religious backgrounds and different value orientations.

3. **The University of Scranton is Catholic.** This means, first of all, that the University is committed to the person and gospel of Jesus Christ as the source of values and attitudes that should characterize the campus culture. The University is church-related and faith-committed. The Church to which it relates understands itself as a "people of God." The faith this University serves is in every instance a gift from God involving the act by which the human person entrusts himself or herself to the one God who calls each in a unique way and reveals Himself to all in an accessible way. Theology, as an intellectual effort to understand the data of divine revelation, is an academic discipline of first rank in a Catholic university. Theology here is done primarily in the Roman Catholic tradition. The University of Scranton stands in that tradition, communicates it in a systematic way, but explores as well other traditions for their intrinsic merit and for the contributions they can make to a better understanding of the Catholic tradition.

4. **The University of Scranton is Jesuit.** This means that the life of the University is inspirited with the vision contained in the Book of the Spiritual Exercises of St. Ignatius of Loyola, the founder (in 1540) of the Jesuit Order. This spirit is brought to the University not only by the Jesuits who live and work there, but also by their lay colleagues and students who may make their own this same vision through the personal experience of the Spiritual Exercises. Translated into an educational context, this vision manifests itself in a respect for the individual student as a unique person, an emphasis on service, on open communication, on freedom of choice, on openness to change, on freedom from inordinate attachments, on commitment to the value system contained in the Gospel of Christ. As Jesuit education grew, these characteristics manifested themselves in more measurable educational terms like clarity of thought, care for fundamentals, excellence in written and oral expression, reflection on personal experience, respect for the best in past human experience.

Winner of the Nobel Prize for Peace, Mother Teresa of Calcutta, India, receiving the University of Scranton's La Storta Medal for Human Service.

To be Jesuit today, the University community must include Jesuits who make their own the elements of Jesuit identity articulated by the delegates to the 32nd General Congregation of the Society of Jesus, the Order's highest legislative body, which met in Rome for three months ending in early 1975. The Congregation's Decree on "Jesuits Today" reads in part: ". . .today the Jesuit is a man whose mission is to dedicate himself entirely to the service of faith and the promotion of justice, in a communion of life and work and sacrifice with the companions who have rallied round the same standard of the Cross and in fidelity to the Vicar of Christ, for the building up of a world at once more human and more divine" (No. 31). But Jesuit identity is served and preserved not by Jesuits alone. Jesuit-lay colleagueship broadens the basis of respect in this University Community for faith as a value and justice as a goal. Upon these characteristics rests the University's Jesuit identity.

5. **The University of Scranton is committed to liberal arts education.** This commitment is held in creative tension with the University's commitment to serve the practical or career-oriented expectations of its students.

It is our goal to blend with the liberal arts an appreciation of basic science. Similarly, it is our goal to provide a foundation in the humanities to all of our programs of scientific specialization.

Career-oriented course concentrations will, at this University, always be accompanied over the full course of undergraduate study by a general education curriculum which, in the judgment of the faculty, gives every student, regardless of major, an adequate exposure to the disciplines of the liberal arts. In line with the emphasis the University attaches to the liberal arts, attractive majors in these disciplines will be provided and special care will be had to foster excellence of teaching and library support for the liberal arts.

6. **The University of Scranton is committed to academic excellence.** The pursuit of this goal touches all elements of the life of the University, as outlined below; but first the University must express its understanding of the idea of excellence. Excellence is, in every instance, a relative term. To excel, is to move or stand apart from a well-defined starting point. Our pursuit of academic excellence begins with an understanding of where we are and what we propose to do.

a. **Students.** We begin with a respect for the varying capacity of the students, a characteristic Ignatius of Loyola insisted upon for his schools. The University will include in its student body no one who is incapable of serious academic work. But given that initial norm, the University wants heterogeneity in its student body with respect to race, sex, religion, socio-economic background, and academic potential. Moreover, the University intends, in the spirit of Christ, to do all it can to serve the poor. Excellence in the student body is measured in terms of development of academic potential, respecting in every case the unique characteristics and varying capacity of students.

b. **Faculty.** We begin with the acknowledgment that the quality of the University depends essentially on the quality of the faculty. We also propose to be primarily a teaching University, rather than a research center. The University takes the position that good teaching is enhanced by serious research and will not last without it. Hence, excellence in the University's faculty is measured in terms of continued advancement in the quality, effectiveness and vitality of classroom performance, as well as the continued application of faculty energy to research which, ordinarily, will lead to occasional publication for a scholarly or generally well-educated audience beyond the University community. We regard teaching and research as complementary, not in opposition or competition with each other.

c. **Administration.** The starting point from which administrators move to excel is manifold. It presupposes credentials appropriate for leadership and management in an educational environment, experience with the special problems of that environment, and knowledge of, as well as being known in, the academic community beyond the University. Excellence is then measured along lines of improved knowledge of the University as an institution and a community, service to the constituencies of the University, availability and responsiveness to the needs of the University community, management of financial and academic affairs, effectiveness of planning, decision-making and communication of plans and decisions to the University community, and impact in the realm of ideas and influence in the metropolitan area or beyond.

7. **The University of Scranton is committed to personalized education.** The student is at the center of everything the University does. Inspired by a Christian personalism, our governance, instruction, and all related services, especially counseling services and academic advising, respect the uniqueness of the individual. The individual is viewed, however, as a member of a campus community and of a larger human community. The educational approach of Christian personalism regards the individual as a person-in-community. Education at the Uni-

versity of Scranton aims to sensitize the student to his or her societal obligations as well as to his or her unique personal value, thus avoiding, it is to be hoped, a rugged individualism or a mindless collectivism in the collegiate years and in later life. With total respect for an individual's freedom of choice and conscience, the University provides opportunities for worship and spiritual growth. Provision is also made for social development in a community environment informed by Catholic principles. The social and intellectual dimensions of the campus community are value oriented, designed to foster in every student principled judgments and actions that are free, responsible and humanly valid.

8. **The University of Scranton is committed,** as one of the dominant institutions in the civic community of Scranton, **to off-campus community service.** The primary service rendered by the University to the area is the education of future leaders for the area's professional, political, religious, cultural and business communities. Without interrupting or hindering this work, the University recognizes its capability and responsibility of rendering technical and cultural assistance on occasion to members of the communities enumerated immediately above. It also recognizes its responsibility to provide students, as students, with experience of the dominant social and economic problems of this region. This is in order to assist them in systematic analysis of the problems of contemporary life and motivate them to contribute in some way after graduation to the solution of these human problems.

The University, moreover, will encourage faculty research directed toward an enlargement of the region's understanding of its own problems.

Finally, the University will encourage and support members of its campus community to exercise their right to speak out as conscientious citizens against injustices which are perceived to be causing or exacerbating social problems in the civic community.

9. **The University acknowledges that being in the Jesuit tradition means being experimental and innovative.** The Jesuit belongs on the growing edge of Catholic life, interpreting the Church to the world and the world to the Church. It is in the Jesuit style to do, in education or any other work, what others cannot or choose not to do. The University therefore commits itself to the fostering of these Jesuit characteristics from its well-established institutional base. The educational apostolate under Jesuit auspices is instrumental; it is not an end in itself. The apostolate is a means for promoting the greater glory of God through the life of the minds of human persons. Accordingly, the Jesuit sees as the object of the educational task not only the intellect, but the will also, and indeed the total human person. The University of Scranton views its educational task in the same way.

10. **This Statement of Goals is intended to give direction to all that the University does.** Progress toward these goals will be measured first by the ability of each academic department and administrative unit to choose, and announce the choice of, specific objectives pertaining to each division of this Goals Statement. Second, progress toward our goals will be measured by the actual achievement of the stated objectives. The objectives, clearly stated, quantified and specified within a time frame, will be the means to the ends spelled out in this Statement.

THE CAMPUS

Since 1956, a development program has added 16 modern buildings including ten residence halls. Principal among these campus structures are:

ALUMNI MEMORIAL LIBRARY—opened in 1960, a striking presentation of advanced, functional architectural planning, (See photo page 16), this bright air-conditioned building contains more than 205,000 volumes and subscription service to 1,300 periodicals. Microfilm, microcard and microfiche collections, a science reference room, and the offices of the University's semi-monthly national book review, *Best Sellers,* are located here. Additionally, the Cooperative Program with Marywood College, less than two miles away, gives students full privileges to another 150,000 volumes, 1,200 periodicals, as well as an extensive collection of audiovisual materials. Through the library's membership in the interlibrary loan communications network of the Northeastern Pennsylvania Bibliographic Center, students have access to more than 430,000 titles in the affiliated eight libraries.

JOHN J. LONG CENTER—completed in 1968, and named for the former Jesuit President of the University, this three-level, multi-purpose structure has enabled the University to broaden its program of physical education. (See photo p. 13). It includes a 22,820 square foot main floor area used for basketball, or convocations with a seating capacity of 4,400. It provides specialized facilities for such activities as wrestling, weight lifting, handball, tennis, and golf, as well as a physical therapy room and sauna.

LOYOLA HALL OF SCIENCE—provides the highly specialized equipment necessary for the study of engineering, physics, chemistry, and biology.

SAINT THOMAS HALL—located in the center of campus, this building is named for St. Thomas Aquinas and provides a symbolic historic link between the modern University of Scranton and its predecessor, St. Thomas College. It contains many non-science classrooms, language and communication laboratories, the Computer Center, the University Chapel of St. Ignatius Loyola, offices for the Registrar, Treasurer, Dean of the College of Arts and Sciences, Admissions, Financial Aid, Academic Vice President, Office of Career Services, Counseling Center, Graduate School, Dexter Hanley College, and Director of Continuing Education.

O'HARA HALL—the recently acquired O'Hara Hall houses Dean of the School of Management, classrooms, accounting laboratories, and faculty offices for the School of Management as well as the classrooms, laboratories, and faculty offices of the Departments of Psychology, Military Science, Human Resources, and Nursing. It is named in honor of Frank J. O'Hara who served the University for over a half-century.

GUNSTER MEMORIAL STUDENT ACTIVITIES CENTER—facilities include faculty and student lounges, cafeteria and snack bar, rifle range, game room, and the 400-seat Eagen Auditorium used for cultural events and dramatic productions. The offices of the Vice-President for Student Affairs, Dean of Students, Campus Ministry, Student Government, and many student activities are found here.

JEFFERSON HALL—houses both residence facilities and centers for special activities, the radio and television labs, a 300-seat auditorium, a swimming pool, and the Lawrence Mann reading room. Offices for Security, Veterans Affairs, *Windhover and Esprit* are located in this building.

UNIVERSITY COMMONS—provides the University with a central campus environment. The Commons has a serpentine alignment with the area in front of the Gunster Memorial forming a focus for the campus. In the space in front of the Gunster Memorial, a gathering area and speakers forum is available. The Commons includes a z-brick pedestrian walking mall, outside benches, modern lighting, an entrance sign, and outdoor meeting and speakers forum, and an attractive campus environment. The area provides a major pedestrian link between Galvin Terrace, the University's outdoor sports center, the Gunster Memorial Student Activities Center, John Long Center, and residence halls. Galvin Terrace, which was completed the Summer of 1978, forms a pedestrian link from Monroe Avenue to Linden Street and the Commons extends this access to the rest of the campus.

THE GRADUATE SCHOOL

A resource at hand to undergraduates is the University's Graduate School which offers the Master of Business Administration degree as well as Master of Arts or Master of Science degrees in Art Education, Biochemistry, Chemistry, Counselor Education, Elementary and Secondary Education and Educational Administration, English, General Science, History, Physics, Reading, Rehabilitation Counseling and Human Resources Administration.

A number of these departments offer accelerated programs which enable students to graduate with both the Bachelor and Master's degrees in five years or less. In addition, undergraduates with strong academic records and the permission of the appropriate deans are allowed to take courses in the Graduate School as part of their undergraduate program.

In affiliation with the Himalayan International Institute in Honesdale, Pa., the Graduate School also offers a Master's Degree in Eastern Studies and Comparative Psychology. It also cooperates in the Master's Degree Program in Nursing offered by College Misericordia, Dallas, Pa.

DEXTER L. HANLEY COLLEGE

The Dexter L. Hanley College, named in honor of the late Jesuit Labor Lawyer and former President of the University, provides undergraduate education leading to both Associate and Bachelor's degrees for adults and others desiring to take their courses on either a predominantly part-time basis or during the evening.

RESIDENCE HALLS—designed to function according to small-group living principles, ten residence halls for out-of-town students are provided on the campus. They are centered about terraced quadrangles. A Jesuit counsellor lives in most halls and there is a resident assistant on each floor.

To meet the increasing enrollment of out-of-town students, the University has also recently acquired a series of houses and apartment buildings in the vicinity of campus and converted these to various of student apartment-complexes. Some of these are organized about academic interests and most feature optional kitchen arrangements. Finally, students in the upper classes are permitted to live off campus in non-university owned apartments.

The standard plan for resident students includes living quarters, three meals on each class day, and brunch and dinner on weekends and mid-week holidays. The plan includes nursing service for emergency and short-term care in the infirmary. Further information is given in that section of the bulletin which deals with expenses.

A FACULTY WHICH TEACHES

If the University brings to the student a tradition and distinct values, its most important resource is its faculty. Over 200 faculty and administrators participate in the educational enterprise. They hold degrees from 135 different universities in 30 foreign countries on five continents. Cambridge and the University of London in England; Louvain and the Gregorian on the Continent; the University of Calcutta in India, the Sophia University in Japan, Soochow University in China; Berkeley, Harvard, Yale, MIT, Notre Dame and Georgetown in America—all are represented among the faculty.

By its nature and function, a university faculty constitutes the most cosmopolitan element in a community. Hindu and Muslim, Christian and Jew, ministers and rabbis, scholars, research scientists, and above all, teachers, are found on the University's faculty.

The Jesuit tradition is carried on at the University not only by the 30 Jesuits engaged in teaching or administration, but by the fact that over two-thirds of the faculty hold at least one degree from a Jesuit college.

Many of the pictures which follow and the Faculty Directory at the conclusion of this Bulletin present more detailed information about the faculty.

Charles Thoman, S.J., Ph.D., University of Massachusetts, Professor of Chemistry and Chairman of the Department.

Thomas Scott, S.J., Ph.D. University of Wisconsin, specialist in computer uses for study of history.

John Quinn, S.J., Ph.D. University of London, specialist in cinema studies

Francis MacEntee, S.J., Ph.D. Catholic University of America, biological researcher in recycling exhausted soils

Professors Ellen and Steve Casey, Departments of English and Theology; Danforth Associates, Director of the Honors Program and Associate Professor of Theology, respectively

Rabbi Simon Shoop, Jewish Studies; M.A. Yeshiva University; Ph.D. University of Pittsburgh; M.H.L. Jewish Theological Seminary of America.

Professor Anne Jones, Assistant Professor in American and Visual Arts

Rev. Edward Gannon, S.J., University Professor

Professors John Beidler and Andrew Plonsky, Department of Computer Science

THE SCRANTON ENVIRONMENT

The fifth largest city in the state, Scranton with a population of almost 90,000, is the principal city of Northeastern Pennsylvania. As a focal point of the interstate highway system, it is less than three hours by car from New York City and Philadelphia. The Pocono Mountains and Susquehanna River resorts with magnificent streams, lakes, and numerous ski slopes are only an hour away.

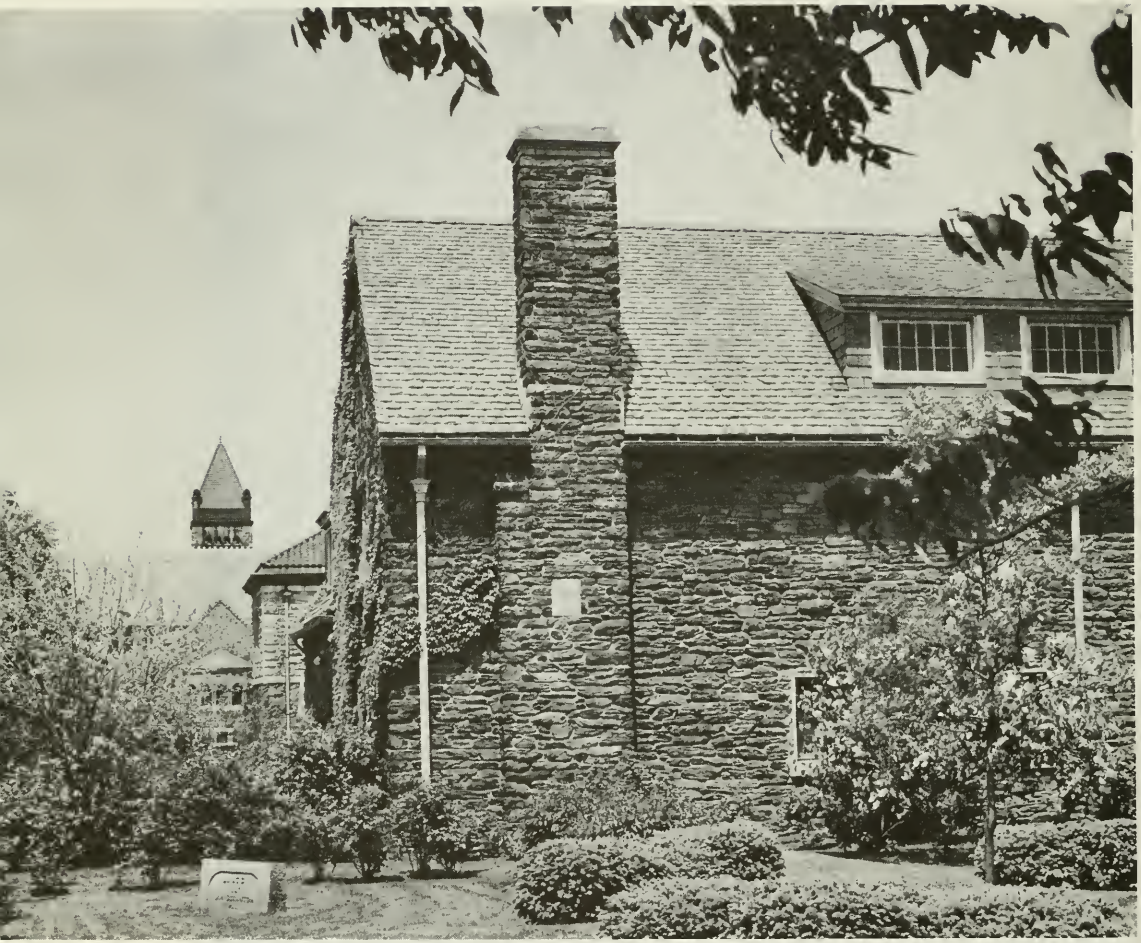
The city itself is a unique laboratory of the American urban tradition. Her industrial history dates from 1840 when the anthracite hot blast furnace was utilized for the first time in the iron industry. The manufacture of iron and steel gradually gave way to the more important anthracite mining industry, the city and entire Lackawanna Valley being underlaid with one of the richest hard coal deposits in the world. The mines served to attract immigrants from a multitude of nations, giving Scranton even today, sociologically and ethnically, one of the most diverse populations in America.

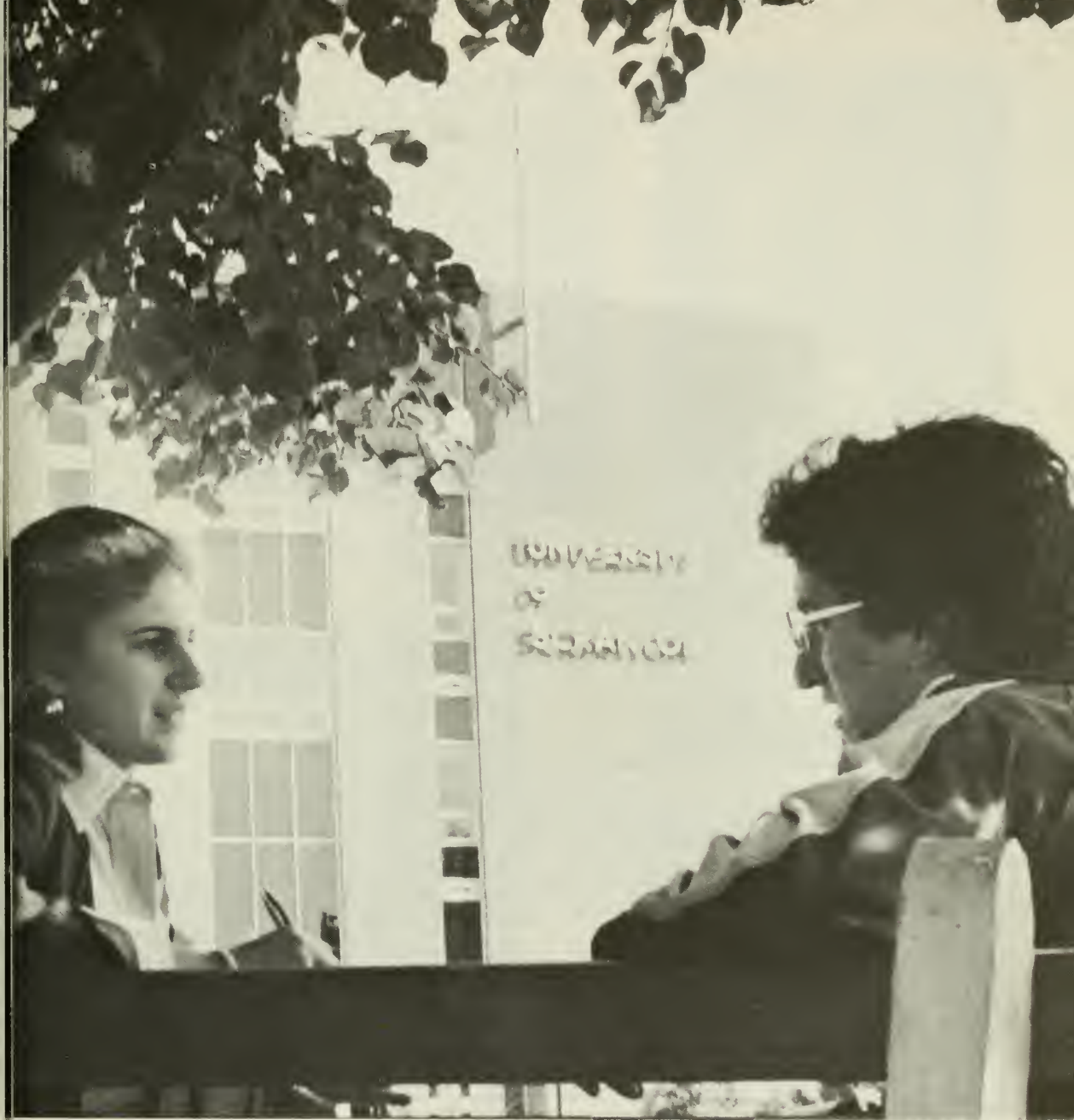
As the anthracite industry collapsed towards the end of World War II, Scranton was faced with challenges only later to be faced by many other American cities: almost total conversion to a new economic base of manufacturing, reclamation of the area from the environmental pollution of the anthracite era, and amid all this change, the preservation of its own identity.

The recent restoration of the century-old Lackawanna Iron and Steel Co. furnaces just south of the University, the establishment of a National Coal and Recreation Park, the continuing development of the local Everhart Museum, part of whose collection of the 19th century American folk art represented the United States at Expo 70 in Japan and the Munich Olympics, are indicative of the city's uniqueness.

As the pages of the Bulletin illustrate, historically the University has been an integral part of the Scranton environment. The modernistic campus, built almost entirely in the last decade, overlooks the downtown area of the city. The historic nucleus of the campus is the Victorian mansion built in 1870 by Joseph Scranton, great-grandfather of William Scranton, former Governor of Pennsylvania and U.S. Ambassador to the United Nations. The mansion and estate grounds were given to the University by the Scranton family. Mrs. William Scranton recently concluded a term on the University's Board of Trustees.

As the city has served the University, so the University has served the city. Fully half of the area's doctors, dentists, lawyers, accountants, and male high school teachers are graduates of the University. Much of the business community responsible for the city's economic renewal received its training either at the bachelor's or master's level from the University. Members of the University faculty serve the region through research on the genetic effects of environmental pollution and soil reclamation of the culm waste deposits of the mines. In the advance from the technology of the anthracite hot blast furnace to our Sigma VI computer, the University and the city have been partners.





WHAT THE STUDENT BRINGS TO THE UNIVERSITY

WHAT THE STUDENT BRINGS TO THE UNIVERSITY

If the University changes, it is primarily the succeeding student generations which change it. A recent issue of the *Windhover,* the college yearbook, was dedicated by its editors to the "Committed Idealist," to those students who bring to the University community their active participation in its life and whose diversity and academic achievements add to the prestige of their alma mater.

DIVERSITY

As the faculty come from around the world, so do our students. Twenty-four states and 15 foreign countries are represented in the University's student body. In turn, through the Fulbright and Year Abroad program, University of Scranton students matriculate at such foreign universities as Louvain, Madrid, Tubingen, Mainz, Oslo, Fribourg, Cologne, Berne, Strasbourg, the Sorbonne, and University College, Dublin. This interchange of students contributes to the diversity and intellectual life of the University.

It is a source of pride to the University of Scranton that a diversity of political and social views flourishes among our students. In the political turmoil of recent years which shut down many universities and brought violence to others, it was the determination of her students and faculty that the doors of this University should remain open, its classes held, that all opinions should be heard and orderly processes followed in the resolution of our problems.

PARTICIPATION

Much of the work in a university community is accomplished through student input. Much of the scientific research at the University is done by undergraduate students in the laboratories and in the field. The University newspaper and yearbook are edited and managed by students. Frequently students publish reviews in *Best Sellers* and, with faculty assistance, in other national scholarly journals. Students work in the public relations and admissions offices, computer center, as resident assistants in the dormitories, as research assistants and interns for deans and registrars.

Similarly, they participate in the University's decision making. Six students are elected by the student body to serve on the University Senate. Others serve with departmental chairmen and faculty on the Conference which recommends to the Dean changes in the academic program of the college. They form a majority on the Student Affairs Council which prepares legislation for the president's review. Students also serve with other members of the University community on the various Search Committees which recommend candidates for the several administrative posts.

Royals Historical Society at Cloisters in New York

Miss Linda D'Andrea, '77, M.D. graduate of Thomas Jefferson University Medical School and Trustee of the University of Scranton

Two members of O'Hara Day Student Committee

ACHIEVEMENT

The Jesuit educational tradition has produced men as diverse as Charles De Gaulle, James Joyce, Teilhard de Chardin, Pope Paul VI, Doctor Tom Dooley, Prime Minister Trudeau of Canada, film maker Alfred Hitchcock, coach Vince Lombardi—to name but a few of over 2,000,000 alumni. Sixteen thousand of these alumni have graduated from the University of Scranton. These, too, have achieved:

Patrick Cardinal O'Boyle ('16, classics), Archbishop of Washington; Dr. Clarence Walton ('37, history), first lay president of the Catholic University of America; Dr. Glynn Lunney ('55, pre-engineering), Chief of the Flight Director's Office for the National Aeronautics and Space Administration, lead flight director for historic moon flights of Apollo 11 through 15; Jason Miller ('61, English), winner of the 1973 Pulitzer Price in Drama for *That Championship Season* and "Oscar" nominee for his role in *The Exorcist.*

Achievement is recognized too in the number of prestigious national fellowships awarded to graduates of the College in recent years. During 1979-80, four University students received Fulbright awards: Louis Furiosi, a double major in French and English, for study at the University of Tours in France; Dennis Hagemann, a double major in philosophy and English, for study at the University of Cologne in Germany; Christine Piatek, a law enforcement major, for study at the University of Warsaw in Poland; Mark Bender, a modern language major, at the University of Bucharest in Rumania.

Michael J. Eagen, Sr., '27
Chief Justice of Pennsylvania

Clarence C. Walton, '37
President, Catholic University of America

Martin P. McNamee, '80
Danforth Graduate Fellowship
(English)

Gregory Garger, '81
1979 Truman Memorial Scholar
from Pennsylvania
(Public Administration)

Arlene Drack, '81
ITT Fellow to Norway
(Biology)

1981-82 Fulbrighters: Irene Mlodzinski (Chemistry & French) and Mark Wisniewski (Computer Science & German) to Switzerland; Arlene Drack (Biology) to Norway; Brian Wynne (History) and Deborah Krzywiecz (Biochemistry) to Germany; Patrick Cumberland (History) to Uruguay.

During 1980-81, these University of Scranton students held national fellowships: Martin McNamee, '80, an English major, won one of the 60 national Danforth Fellowships for graduate study; Gregory Garger, '81, a public administration major, held the Harry S. Truman Memorial Scholarship for Pennsylvania; Stephen Carlin, '80, a double major in Spanish and human services, held a Fulbright Fellowship to the Catholic University of Valparaiso in Chile; Helen Hricko, '80, a double major in German and biochemistry, held a Fulbright to the University of Tubingen in Germany; Veronica Cardiff, '80, a German major, held a Fulbright to the University of Kiel in Germany; Michael Corbley, '80, a double major in physics and chemistry, held a Fulbright to the University of Bern in Switzerland; Maryann L. Heckman, a Law Enforcement major, received a Fulbright to Uruguay.

This past year, a record number of University of Scranton students (6) won Fulbright Fellowships: Mark Wisniewski, a double major in computer science and German, is studying at the Federal Institute of Technology in Zurich, Switzerland; Irene Mlodzinski, a chemistry-French major, is at Fribourg University in Switzerland. Brian Wynne, a history major, is doing graduate study in political economy at the University of Cologne in Germany; Deborah Krzywiec, a biochemistry major, is also in Germany at the University of Mainz; Arlene Drack, a biology major, is one of the nation's 25 ITT Fellows and is studying at the University of Oslo in Norway; Patrick Cumberland, a history major, is a Fulbrighter in Uruguay.

In all, 26 University of Scranton students have won Fulbright Fellowships in the last decade.

In addition, Kathleen Flanagan, '81, a double major in French and English, has been awarded an International Rotary Fellowship to France for 1982-83.

The record of achievement continues with the most recent classes whose graduates went on to Georgetown, Harvard, Rutgers, Cornell, U. of Pennsylvania Law Schools; MIT, Rochester, William and Mary, Boston College, Notre Dame, Louvain, Dartmouth, Carnegie-Mellon Graduate Schools; and Columbia, Temple, Hershey, Thomas Jefferson, U. of Pennsylvania, and Georgetown Medical Schools, among other institutions. The 3,000 students currently enrolled in the College of Arts and Sciences and School of Management are a distinguished part of the half-million students now enrolled in Jesuit educational institutions around the world.

Dr. William J. Parente, Dean of the College of Arts and Sciences, and Dr. Henry N. Amato, Dean of the School of Management

THE ACADEMIC PROGRAM

ACADEMIC PROGRAM

DEGREE PROGRAMS

The University offers the following degree programs for the undergraduate student:

BACHELOR OF ARTS
- Classical Languages
- Communications
- English
- History
- Modern Languages
- Philosophy
- Theology and Religious Studies

BACHELOR OF SCIENCE
- Accounting
- Biochemistry
- Biology
- Biophysics
- Chemistry
- Chemistry-Business
- Computer Science
- Criminal Justice/Law Enforcement
- Economics/Finance
- Education
- Electronics Engineering
- Electronics-Business
- Family Studies
- Food Science and Nutritional Chemistry
- Gerontology
- Health and Human Services
- International Studies
- Management
- Marketing
- Mathematics
- Medical Technology
- Nursing
- Physical Therapy
- Physics
- Political Science
- Psychology
- Public Administration and Public Affairs
- Sociology

COOPERATIVE PROGRAM WITH MARYWOOD COLLEGE

The University's Cooperative Program with Marywood College—less than two miles away and the largest college for women in America—makes available to University students additional individual courses.

THE SCRANTON PLAN

The product of a two-year study by a faculty-student-administration committee, the new Scranton Plan seeks traditional Jesuit university educational objectives in the era of the knowledge explosion. In departing from a core curriculum of specifically required subjects, it acknowledges that there are today many more requirements for a liberally educated person than was formerly the case: disciplines, especially in the natural and social sciences, not known a century ago; foreign cultures thought insignificant only fifty years ago.

The New Curriculum, in seeking to equip undergraduates with the ability to effectively communicate their knowledge, takes note that there are today many more ways to communicate than in the past. Computer science and other quantitative languages, applied fine arts as aesthetic languages, writing and oral com-

munication laboratories may develop the ability to communicate with others and carry on the University's traditional emphasis on rhetoric as cogently as the study of Latin and Greek in the past, or even the study of modern foreign languages in today's world of intensified international relations. Different students will have different communication interests and it is a virtue of the new curriculum that its flexibility can accommodate and utilize that interest.

Finally, the Scranton Plan takes note that contemporary students have criticized the absence of the study of values on American university campuses, the failure of the universities to deal with philosophies of life which provide the means to evaluate the norms of national and personal actions. The new Scranton curriculum provides a significant place for the study of philosophy, the theological tradition of the student, and comparative religions. This too continues a traditional emphasis in the University's educational pattern but allows the student flexibility in choosing to meet third and fourth year general education requirements, either through theology or philosophy, in opening up more opportunities for the study of human values through related courses in psychology, sociology, environmental sciences, etc., and in making it more feasible to carry a double major in theology or philosophy along with the student's regular major.

CURRICULAR OUTLINE

Major Field of Concentration ..... 36 credits
Cognates Related to Major ..... 24 credits
General Education ..... 67 credits

Major: 36 credits in the major field of concentration is the normal amount. Some departments require less, the minimum being 30 hours with the unallocated credits going into the other curricular areas. Several departments, especially in the physical science area, require more than 36 hours, the additional credits coming from the cognate area and/or as overloads beyond the normal 127 credits needed for graduation. The specific departmental curricular models on subsequent pages of the Bulletin should be consulted. Students desiring to shape an **interdisciplinary major** should consult the appropriate Dean on their program.

Cognate: These are courses external to the major field of concentration, but which round out the student's competence in his major through the study of related disciplines and subject matter, or the acquisition of skills useful to his specific vocational goals. Normally the cognate will consist of 24 credit hours, some of which may be specified by the department and others chosen by the student according to his particular interests or objectives.

General Education: Shunning a merely technical or pre-professional education, the majority (67) of the student's 127 credits toward the degree are devoted to a broad liberal education according to the following pattern.

A. **Physical Education**—Four one-credit courses in the freshman and sophomore years ..... 4 credits

B. **Distribution of remaining credits into broad areas of knowledge as indicated in the table** ..... 63 credits

In some instances, departmental recommendations are made with respect to the general education courses; departmental curricular models should be consulted. In fulfilling the distribution requirement, a student ought ordinarily to complete at least five two-course sequences to provide depth as well as breadth in his general education.

C. **Interdisciplinary Courses**—These one semester courses are taught by professors from at least two different departments. Their purpose is to demonstrate the inter-relatedness of various fields of knowledge and the necessity to synthesize. They are taken in junior or senior year.

D. **Communication Skills**—Unlike many college curricula, the new Scranton curriculum does not require specific courses in English grammar. Rather, because of its recognition that writing and speaking effectively are skills necessary for success in college and in one's later professional life, the University of Scranton requires that students must demonstrate basic competencies in written and oral communication before their junior year. Each of these competencies may be demonstrated by the students in one of the following ways:

1. Competence indicated by the high school data submitted for admission: academic achievement or extracurricular success in these areas.
2. An examination supervised by Communication Center faculty.
3. Certification by a professor that the student's class papers or oral presentations clearly demonstrate each competence.
4. Successful completion (a grade of C or higher) of courses set up to facilitate mastery of these skills: English 2 for oral communication; English 7 for writing skills.

E. **Non-Classroom Activites**—With the approval of the appropriate Dean and the department, the student is encouraged to petition beforehand that certain non-classroom activities such as travel abroad, internships, participation in artistic productions, sustained activity in political, social, or religious organizations, etc. be supervised, evaluated, and accepted for academic credit—normally in the Free Area of the General Education distribution.

DOUBLE MAJOR PROGRAM

Students at the end of the first semester of sophomore year or thereafter may elect to pursue a second field of concentration in addition to their first major. The permission of the appropriate Dean and the agreement of the two pertinent departmental chairmen should be obtained in writing at this time and placed in the student's file. The student is responsible for all major and required cognate courses. The 67 credits in the General Education area need not, of course, be repeated. The Registrar's office will add the notation of the second major to the student's transcript in the first month of the student's senior year by which time he/she should have registered for all the courses required in the double major program. Thirty students in the class of '81 graduated with double majors. History, mathematics, and business administration were most favored (four students each), with computer science, psychology, foreign languages, sociology, theology, political science, philosophy next (three students in each), and biology, physics, accounting, chemistry, and communications also represented.

DISTRIBUTION TABLE

General Education Areas	MAJOR FIELDS OF CONCENTRATION					
	Nat. Sci. Math Psych. Comp. Sci. Engineering Nursing‡	*Human Services Sociology† Pol. Sci. Economics Law Enforcement*	*English History Modern Lang.*	*Philosophy Theology*	*Communications*	*Accounting Economics Marketing Management*
	a	*b*	c	*d*	e	f
I. *Natural Science & Quantitative Studies* (Natural Sciences, Math., Engineering, Adv. Experimental Psych., Adv. Computer Sci., Statistics)	—	9	9	9	9	9
II. *Social and Behavioral Sciences* (Sociology, Economics, Pol. Sci., Psychology 23, 25, 26, 147, M.S. 101, Education)	12	—	12	12	6	6
III. *Communications* (Speech, Writing, Elementary and Intermediate Languages, Applied Fine Arts, CMPS 20, 21, 25)	9	9	9	9	—	9
IV. *Humanities* (History, Fine Arts—Appreciation, English/Foreign Lit., Advanced Languages)	18	18	6	18	18	18
V. *Philosophy and Theology*						
Philosophy	6	6	6	6	6	6
	(6)*	(6)*	(6)*	or (6)*	(6)*	(6)*
Theo./Religious Studies	6	6	6	6	6	6
Free Area	6	9	9	9	12	3
			CREDITS			

‡Nursing requires only 9 credits in AREA II and 6 credits in AREA III.

†Sociology allows 12 credits in Free Area.

*Indicates these credits may be taken in either Philosophy or Religious Studies.

SPECIAL PROGRAMS

THREE-YEAR BACHELOR'S DEGREE PROGRAM

The University of Scranton's New Curriculum and new calendar allow qualified students to attain their bachelor's degree within three years—thus considerably reducing the overall cost of their undergraduate education and allowing the student to enter the market place or begin graduate and professional studies a year earlier. While Advanced Placement or College Level Examination Program credits (see Index) are very useful for this, a student who does not bring these from high school may still complete the degree program in most majors within three years through the use of January Intersession courses and/or Summer School sessions. This presumes that at a minimum, normal academic progress is being made. Typically two Summer Schools (12 credits each) and two or three January Intersessions will suffice. Especially qualified students may be allowed overloads from the appropriate Dean to further reduce this—as will Advanced Placement credits. The Dean should be contacted as early as possible in a student's career in order to facilitate the needed scheduling. Entering freshman students may want to use the Summer School immediately following their high school graduation to further this three-year program; the Director of Admissions should be consulted with respect to this. Details on the special Scranton Prep-University Seven Year (4-3) high school-college degree program are available from the Dean of Studies at Scranton Prep.

FIVE-YEAR BACHELOR-MASTER'S DEGREE PROGRAM

This program enables University undergraduates to complete both the bachelor's and master's degree program within five years in the fields of English, Business, Chemistry, Biochemistry, Human Services, and Physics. Students elect to enter the program after sophomore year. Ordinarily two summers of study or equivalent January intersessions are needed.

FOUR-YEAR BACHELOR-MASTER'S DEGREE PROGRAM

Qualified undergraduates in the departments of history and chemistry have the option of pursuing a four-year program leading to simultaneous conferral of bachelor and master's degrees in history, chemistry or biochemistry. Summer work and the use of 12-13 graduate credits in place of undergraduate courses are involved. The departmental chairman should be consulted for details.

HONORS PROGRAM

This program provides selected students whose QPI is at least 3.3 with the opportunity for directed independent work and a challenge to their ability to synthesize. Applicants are admitted to candidacy in their third semester of college. Those admitted to the program take inter-disciplinary seminars as well as tutorials both in and outside their major field. All honors degree students must complete and orally defend a thesis of publishable quality. For details consult the Director of the Honors Program, Dr. Ellen M. Casey.

SPECIAL JESUIT LIBERAL ARTS CURRICULUM

This specification of the credits available to all students in the College's General Education program is intended to follow more closely the traditional Jesuit liberal arts core curriculum while still adapting itself to contemporary intellectual and social developments. This distribution pattern emphasizes:

1. The transmission of the Western classical heritage and the Christian humanist culture to the contemporary student through literature, history, philosophy and theology.
2. An ability to undertake logical, systematic, and critical reflection on a given intellectual problem and to apply one's conclusions to the contemporary situation.
3. An understanding of and sensitivity towards the contemporary problems of equality and individual freedom, of economic, social and political justice.
4. An outstanding ability to communicate or what Jesuits historically have referred to as "eloquentia perfecta." This aims not merely at competence but mastery of writing and speaking skills with the goal of persuasion and full communication of one's ideas. Students are strongly urged as part of this program to join the College's drama group, the debate squad and to write for the *Aquinas*, the college newspaper, *Esprit*, the literary quarterly, or the book review journal, *Best Sellers*.

Every other year, during the month of January, the SJLA students participate in an academic program held in a European capital. During 1980-81, Rome was the site; for 1982-83, Vienna is expected to be the site. Questions on the Jesuit Liberal Arts Curriculum should be addressed to its Director, Rev. Edward Gannon, S.J.

Dept. & No.	Fall Semester	Spring Semester	Credits	
		FRESHMAN		
MAJOR	MAJOR	MAJOR	4/3	4/3
COGNATE	COGNATE	COGNATE	4½/3	4½/3
Psych. 23-Soc. 22	Introduction to Psychology	Social Problems	3	3
Phil. 20-108	Introduction to Philosophy	Metaphysics	3	3
T/RS 21-Econ. 10	Introduction to Theology	Essentials of Economic Theory	3	3
Ph. Ed. 23-24	Basic Physical Education	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	MAJOR	MAJOR	4½/3	4½/3
COGNATE	COGNATE	COGNATE	4/3	4/3
COGNATE	COGNATE	COGNATE	4/3	4/3
Phil. 112-Comm. 12	Logical/Rhetorical Analysis	Advanced Composition	3	3
Phil. 104-Hist. 102	Epistemology	Ancient History II	3	3
Ph. Ed. 1-2	Advanced Physical Educ.	Advanced Physical Educ.	1	1
			16	16
		JUNIOR		
MAJOR	MAJOR	MAJOR	4½/3	4½/3
MAJOR/COGNATE	MAJOR/COGNATE	MAJOR/COGNATE	4/3	4/3
COGNATE	COGNATE	COGNATE	3	3
T/RS 158-Phil 159	Perspectives I	Perspectives II	3	3
Hum. 151-152	Masterworks I	Masterworks II	3	3
Phil. 110-122	Ethics	Modern Philosophy II	3	3
			18	18
		SENIOR		
MAJOR	MAJOR	MAJOR	3	3
MAJOR	MAJOR	MAJOR	3	3
Hist. 3-4	European History 1500-1815	European History 1815-Present	3	3
Phil. and Engl. Elec.	Contemporary Phil. Elec.	English Literature Elective	3	3
T/RS 112-165	Gospels and Jesus	Moral Theology	3	3
			15	15

TOTAL: 140-130 credits,
Depending on major

YEAR ABROAD PROGRAM

Students with above average (3.0 QPI) academic records are encouraged to participate in the University's Year Abroad Program. This ordinarily takes place in junior year but with permission may also take place in sophomore or senior year.

The University of Scranton is affiliated with the Loyola-Rome Center and with the International Student Exchange Program. This year, 15 University students are attending Louvain University in Belgium, the University of Madrid, University College in Cork, Ireland, and in France, Nigeria, and Canada as well. Interested students should contact the Dean of the College of Arts and Sciences for detailed information.

ASSOCIATION OF JESUIT COLLEGES

A variant of the Year Abroad is the University's program in conjunction with the 28 Jesuit universities in America by which above-average (3.0 QPI) students may spend a semester or full year at another Jesuit institution. These institutions are listed on page 191. Consult the Dean of the College of Arts & Sciences for details on this program.

INTERNSHIP PROGRAMS

The University's committment to internships as an integral part of the educational process is strong and growing. In 1980-81, almost 250 students in the College of Arts & Sciences were engaged in internships carrying academic credit related to their major or vocational goals. 165 of these were seniors—one-third of the class—in ten different majors.

Medical Technology majors spent their senior year in eleven different hospitals in New Jersey, Pennsylvania, Ohio, and New York.

Over a dozen Sociology majors worked in paid internships for health, hospital, psychiatric and social welfare agencies funded by the Scranton Mental Health/Mental Retardation Agency.

Human Service majors select educational, health, welfare, correctional rehabilitation, day care and recreational agencies for their internship settings. Fifty students participated in the undergraduate internship program last year.

Seniors majoring in Accounting are eligible to participate in a 13-week on-the-job internship with eight nationally recognized accounting firms. The internship takes place in December-March of senior year. Selection is made on the basis of QPI rating (minimum 3.0) and on interviews by company representatives. In the most recent year, students worked for such firms as Price Waterhouse, Haskins and Sells, Arthur Andersen, Peat, Marwick, Mitchell & Co., Touche, Ross & Co., Ernst & Ernst, Coopers, Lybrand & Co., in New York, Philadelphia, and other cities.

Communication and English majors served internships with academic credit in a number of newspaper and television station situations as well as in public relations, campus journalism, theatre directing and related positions.

Political Science and history majors—twenty during 1980-81—served pre-law internships in private law firms as well as in the Public Defender's Office, District Magistrate offices, District Attorney's office in Scranton, Philadelphia, and a number of other cities.

ACADEMIC REGULATIONS

DEGREE REQUIREMENTS

In order to earn a bachelor's degree from the College of Arts & Sciences or School of Management the student must complete all the courses prescribed in the curriculum table of the major (pages 50-146). No student will be eligible for graduation who has not removed all failures in required courses or who has not earned the necessary minimum 2.0 (C average) Quality Point Index.

Receipt of the degree is not automatic. Seniors expecting to graduate in the spring should make formal application for the degree by February 15.

GRADING SYSTEM

Grade reports are mailed to all students at the end of each semester and these become part of the official record of the student. Freshmen receive mid-semester grades to inform them of their progress. Upperclass students receive notice at the quarter if they are "deficient" and in danger of failing the course at that time.

A	Excellent (outstanding and/or original work)
B, B+	Very Good (above average work)
C, C+	Satisfactory (average but not outstanding work)
D, D+	Unsatisfactory (passing but below average)
F	Failure (below minimum acceptable standards)
W	Withdrew officially during first or third quarter.
WP	Withdrew officially during second quarter with passing grade;
WF	Withdrew officially during second quarter with failing grade; computed in QPI as an F; equivalent to Failure.
I	Incomplete—must be removed within three weeks.
S	Satisfactory (Pass) } not figured in Quality Point Index
U	Unsatisfactory (Fail) }
Audit	Course not taken for credit. (Change to Audit can be made only by passing students and before end of first or third quarter.)

UNSATISFACTORY: Equivalent to failure.

INCOMPLETE: If a course has not been completed because of illness or some other serious reason, an Incomplete may be given. To remove this grade the student must satisfy all course requirements within three weeks of the end of the exam period. Any course not completed by this time will result in a grade of F.

REPEAT OF COURSE: Special permission is not needed to repeat failed courses; however, prior approval of the Dean is needed to repeat non-failed courses.

CHANGE OF GRADE: A student who believes the grade received for a course is unreasonable should first appeal the matter to the professor whose decision is normally final. The student has the right, however, to appeal to the faculty member's chairman, who will make a recommendation in writing to his Dean. The student may request the Dean to review the matter. The Dean may elect to present the matter to the Dean's Conference for review and recommendation. In either case, the decision of the Dean is final. In no instance will a grade change be considered when it has not been raised to the level of the Dean's office within one month from the time it was submitted to the Registrar's office.

QUALITY POINT INDEX

A standard used in judging a student's performance is his Quality Point Index (QPI) determined as follows:

Each semester hour of credit with a grade of A is valued at 4 quality points; B+ at 3.5 quality points; B at 3.0; C+ at 2.5; C at 2.0; D+ at 1.5; D at 1.0. An F or WF (withdrawn failing) yields no quality points. Thus, for example, a three-credit course with the grade A yields 12 quality points; a B yields 9; a C yields 6.

The Quality Point Index (or Quality Point Average) commonly abbreviated QPI (or QPA) is computed by dividing the total number of Quality Points earned by the total number of credits attempted. For example, 15 credit hours, all at C grade, would earn 30 Quality Points or a 2.0 QPI (30/15).

The total number of credit hours attempted include those courses with final grade F or WF as well as A, B, etc. Notice this Quality Point Index applies only to courses taken at the University of Scranton and is not affected by credits transferred from other colleges.

A Quality Point Index listing is made at the end of each semester. On the basis of his cumulative Point Index, a student's rank in class and his eligibility for honors at graduation are determined.

GRADUATION HONORS

To be eligible for graduation honors, a student must have completed a minimum of 90 credit hours of work at the University of Scranton.

Summa Cum Laude ..... 3.85 Quality Point Index in all subjects
Magna Cum Laude ..... 3.65 Quality Point Index in all subjects
Cum Laude ..... 3.50 Quality Point Index in all subjects

DEAN'S LIST

To be eligible for the Dean's List, the student must complete a full program (12 credits minimum; Pass-Fail courses ordinarily are not included in meeting this minimum). Those students whose QPI for the given semester ranks them in the top 20% of their class are named to the Dean's List for that semester. Names of those on the Dean's List are published each semester.

QUALITATIVE REQUIREMENTS

To graduate from the University of Scranton or to remain as a student in good standing, a Quality Point Index of 2.0 (C grade average) is required.

PROBATION AND DISMISSAL

One semester of probation is granted to students whose QPI falls below 2.0. Students who receive an F or WF while on probation are subject to dismissal, as is any student who incurs 2 F's in one semester, or who has accumulated three F's or WF's which have not been successfully retaken. Probationary status cannot be removed by attending summer school or January intersession.

Students on Academic Probation are allowed to take no more than 14 credits during the fall or spring semesters without explicit approval of the appropriate Dean. Students on probation are ineligible to participate in any co-curricular activities with the exception of departmental clubs with an academic orientation (i.e., Psychology Club, Royals' Historical Society, etc.). Intercollegiate athletics, dramatic and theatrical productions, debate, and Student Government are prohibited.

It is University policy in the case of a student dismissed from another institution or a college of the University itself that this student will not be allowed to register for courses in any of the colleges of the University in the semester following dismissal.

CREDIT EQUIVALENTS

One credit or semester hour represents one lecture period of 50 minutes per week. Two or more hours of laboratory work are equivalent to one lecture hour.

WITHDRAWAL FROM A COURSE

A student wishing to withdraw from a course should first discuss the matter with the instructor. There is always a financial loss to the student when he withdraws from a course and the matter should be carefully considered. If the student believes withdrawal necessary, he should obtain the form for this at the Registrar's Office, have it signed by the instructor and by the appropriate Dean and then return the form to the Registrar's Office. Any tuition credit is based on the date on which the completed form is returned to the Registrar's Office. (See the Schedule of Refunds.) Failure to officially withdraw from a course may result in a failing grade for the course.

ABSENCE FROM CLASS

Freshmen are limited by University regulation to twice as many absences as credits are given for a particular course. Thus six cuts are allowed freshmen in most courses. Upperclassmen have unlimited absences unless the particular professor or the department promulgates in writing some other policy. In any event, students miss class at their own risk.

Students who exceed the cut policy are subject to a failing grade in the course. All absences, for whatever reasons, are covered by the above regulations.

WITHDRAWAL FROM THE COLLEGE

Students desiring to withdraw from the College should discuss the matter with the appropriate Dean and, if so instructed, must submit a request for withdrawal from parents or guardian. The student should also discuss the question with his counselor. The form for withdrawal can be obtained in the Registrar's Office. It must be signed by all of the student's instructors, by the Counseling Center and by the Dean. Similarly, the Dean of Students initials the form to indicate that the student has returned his ID card, and the Library and Treasurer's Office initial the form to indicate that the student's financial accounts with the University are settled. Any tuition refund is based on the date on which the completed form is returned to the Registrar's Office.

GENERAL REGULATIONS

The University reserves the right to modify admission requirements at any time; the right to cancel any course without prior notice to the students; change the arrangement of courses, the requirements for graduation, degrees, tuition, fees and other regulations affecting the student body.

The College reserves the right to take appropriate disciplinary action in the case of any student who conducts himself contrary to the standards of the College. These standards (particularly in the area of Academic Integrity,) are given clear expression in the Faculty and Student Handbooks of the University.

HONOR SOCIETIES

Those National Honor Societies which are represented in the University of Scranton are listed below in order of the foundation of the local chapters. An asterisk after the name indicates that this National Honor Society is a member of the Association of College Honor Societies.

ALPHA SIGMA NU*

The National Jesuit Honor Society founded in 1915 with chapters in 27 Jesuit universities throughout the United States. The Scranton chapter was founded in 1943, the oldest Honor Society in the University. It is the only Honor Society open to students and faculty in all disciplines and all colleges of the University. Its admission standards are the most rigorous. The Greek letters signify *adelphotes skolastikon nikephoron*—brotherhood of honor students. Juniors and Seniors who have distinguished themselves in scholarship, loyalty and service are eligible for membership. Appointment is made by the President of the University on the recommendation of the Dean and nomination by chapter members of the Society. By tradition, the Dean of the College is moderator.

The Society annually presents the Alpha Sigma Nu University Award for Teaching. The recipients of the Award:

1969 Prof. Lawrence Mann †
1970 Prof. Frank Brown †
1971 Prof. Thomas Garrett
1972 Prof. Michael DeMichele
1973 Prof. Bernard Williams
1974 Rev. Bernard Suppe, S.J.
1975 Rev. Edward Gannon, S.J.
1976 Prof. Robert A. Sallavanti
1977 Prof. John P. McLean
1978 Rev. Charles J. Thoman, S.J.
1979 Prof. Urban von Wahlde
1980 Prof. J. Brian Benestad
1981 Atty. John J. McGee

John J. McGee, J.D., Instructor in Business Administration; 1981 winner of Alpha Sigma Nu University Award for Teaching.

PHI ALPHA THETA*

International Honor Society in History. Basic requirements: 12 credits in History; Quality Point Index—General 3.0, 3.1 in History. The Mu Rho chapter was established at the University in 1967.

DELTA MU DELTA*

National Honor Society in Business founded in 1913. Basic requirements: a Quality Point Index of 3.35 with a major in Business Administration or Accounting. The local Omega chapter was established in 1968-69.

SIGMA PI SIGMA*

National Honor Society in Physics for undergraduate and graduate students founded in 1921. Its chapters are restricted to colleges and universities of recognized standing which offer a strong physics major. The local chapter was founded in February 1969.

OMICRON DELTA EPSILON

National Honor Society in Economics. Basic requirements: 12 credit hours in Economics with a General QPI of 3.2 and a 3.0 average in Economics. The local Xi chapter of Pennsylvania was founded in May 1969.

PSI CHI*

National Honor Society in Psychology. Founded in 1931, it has established chapters in 260 colleges and universities in 47 states. The local Xi chapter was installed in May 1969.

PHI DELTA KAPPA

International professional fraternity for men and women in education. Membership is limited to graduate students and teachers. The local chapter was founded in 1970.

PI GAMMA MU*

National Honor Society in Social Science. Founded in 1924 to improve scholarship in the social sciences and to encourage inter-disciplinary study. Basic requirements: 20 credit hours in social science; Quality Point Index of 3.0. The local Alpha Epsilon chapter was founded in February 1971.

ALPHA SIGMA LAMBDA

National Honor Society to encourage scholarship and leadership among evening students. The Alpha Upsilon chapter was installed here in 1972.

ETA SIGMA PHI

National Honor Society for students of Classical Languages. The Scranton Epsilon Gamma chapter was founded in November 1972.

PI MU EPSILON

National Honor Society for Mathematics Majors in Junior or Senior year with a general Quality Point Index of 3.0 and a 3.0 average in Mathematics. The local Pennsylvania Mu chapter was installed in February 1973.

ALPHA MU GAMMA

National Honor Society for students of Foreign Languages. Founded in 1931. The Greek letters signify *amphi mouse glosson:* for the muse of languages. The Scranton Epsilon Gamma chapter of Theta Iota was installed in May 1973.

DELTA SIGMA RHO-TAU KAPPA ALPHA*

National Honor Society in Forensics. Founded in 1963 through merger of societies founded in 1906 and 1908 respectively. The local chapter began in 1975.

DELTA TAU KAPPA

International Social Science Honor Society founded in 1961 is dedicated to high scholastic achievement. The Pennsylvania Beta chapter was installed at the University of Scranton in October 1975. Requirements: QPI of 3.5 and 20 credits in social science.

PHI LAMBDA UPSILON

National Honorary Chemical Society established in 1899. The Scranton Beta Kappa chapter, one of 60 chapters nationwide, was installed in October 1975. For students with 24 credits in chemistry and a 3.0 QPI.

ALPHA EPSILON DELTA*

The National Premedical Honor Society founded in 1926. The Pennsylvania Iota chapter was installed at the University in May 1976.

THETA ALPHA KAPPA

National Honor Society in Theology and Religious Studies founded in 1976 at Manhattan College. The University of Scranton alpha nu chapter was installed on April 4, 1980. Twelve credits in theology with a 3.5 QPI are needed for membership.

SIGMA TAU DELTA*

National Honor Society in English founded in 1924, this organization is for students who major or minor in English and rank in the top 35 percent of the class. The local mu omicron chapter first met on April 30, 1980.

ALPHA EPSILON ALPHA

An honor society founded April 30, 1980 at the University of Scranton to recognize scholarship in the general field of communications. For communication majors with a 3.3 QPI.

ALPHA KAPPA DELTA*

International Honor Society for sociology students founded in 1920. Requirements include 18 credits in sociology with a QPI of 3.0 overall and in sociology. The Pennsylvania upsilon chapter was founded here on May 8, 1980.

SIGMA XI

International Honor Society in Scientific Research founded in 1886. The local club was chartered in 1968 and has been authorized since 1979 to induct as associate members undergraduate or graduate students showing outstanding promise in original research.

PI SIGMA ALPHA*

National Honor Society in political science founded in 1920. The kappa iota chapter at the University of Scranton was installed on May 9, 1980. Membership limited to students with at least 10 credits in political science, a QPI of at least 3.0 in these courses, and overall rank in the upper third of the class.

PRE-LAW PROGRAM

The University is justly proud of its tradition in the field of law. Fully fifty percent of the region's lawyers have done their undergraduate pre-law studies at the University.

The strength of the University's liberal education approach to its pre-law programs is indicated by the record of success its graduates have had in winning admittance to the nation's leading law schools. Graduates of the last graduating class have been admitted to Georgetown and Harvard Law Schools, both of which annually lead all American law schools in admissions selectivity with over 8,000 applications each. University graduates during the same year were admitted to such other law schools as Cornell, Rutgers, NYU, Yale, Boston College, Villanova, Catholic University of America, Temple, U. of Pennsylvania, St. Louis, Dickinson, Boston U., Notre Dame, and twenty other public and private law schools from California to New England.

Pre-Law Curriculum—For admission to law school, no specific undergraduate major is required. In our last senior class, political science was the most frequent major among students admitted to law school. However, students in history, languages, business, English, education, sociology, communications, law enforcement and psychology also won admittance to law school. The single most important factor in admission is not therefore a specific major but rather the degree of academic excellence manifested by the student in pursuing whatever major he/she has chosen for his particular field of competence.

Skills and Courses—The second most important factor in admission to law school is the student's record of achieved skills in the Law School Admission Test (LSAT). The General Education program of the University is designed to enable pre-law students to acquire these skills.

I. Comprehension and Proficiency in Oral and Written Communication:

The University's freshman courses in Oral Communication (Engl. 2) and the Writing Center (Engl. 7) provide a foundation; pre-law students who complete these courses or whose high school record has exempted them, might then take the following courses offered by the faculty:

Comm. 12—Advanced Composition
Engl. 114—Debate and Argument
Phil. 148—Philosophy of Communication
Engl. 124—Creative Writing

The student should also consider participating in the Noel Chabanel Debate Society; the college newspaper; the yearbook; and such campus journals as *Esprit* and *Retrospect.*

II. A Critical Understanding of Human Institutions and Values:

Here the University's courses in the field of history and literature, philosophy and theology are most helpful. The curriculum allows students to use courses of interest as cognates to their major program and as part of the humanities area in the General Education program. British and American Constitutional History (Hist. 122-123, 142-143) are especially recommended.

III. Creative Power in Thinking:

Legal studies and legal work demand the ability to think clearly, carefully and in-

dependently. It is important therefore that pre-law students cultivate skills in research, logic and critical analysis. Especially recommended are:

Philosophy 28—Logic	Philosophy 133—Business Ethics
Philosophy 107—Philosophy of Law	English 113—Logic and Rhetoric

Similarly, quantitative skills are needed. The General Education program allows each student the opportunity for some background in the natural and quantitative or social sciences. Especially recommended as electives or cognates to the major program are:

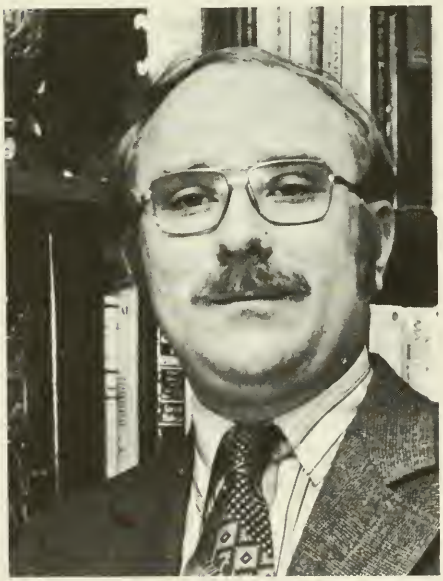
Acc. 3-4—Accounting	Pol. Sci. 133 & 136—Social Science Statistics I-II
C/Le 151—Forensic Chemistry	Math 1-2—Math Discovery

Pre-Law Internships—Interested students with Quality Point Index above 3.0 at the time of application may, with the approval of the Dean, receive academic credit for internships served in the offices of either private law firms or various legal agencies such as the District Attorney, Public Defender or District Magistrate. Prior approval of the planned internship is necessary. Application forms for these internships are available from the Pre-Law Advisor.

Pre-Law Advisory Team—Continuing advice on course selection, career planning, and the procedures for law school application is provided by a Pre-Law Advisory Team, composed of Dr. Frank X.J. Homer and Dr. Robert Hueston of the History Department, along with the University's Office of Career Services. The Team is assisted by both the:

Pre-Law Advisory Board, a group of regional lawyers which provides for close contact between the local legal community, a range of national law schools, and the University's pre-law program; and the

Pre-Law Society, a student organization which provides a forum for speakers invited on campus to discuss the many aspects of the legal profession.



Dr. Frank Homer,
University Pre-Law Advisor

PRE-MEDICAL PROGRAMS

The success of the University's pre-medical program has been outstanding. Notwithstanding the fact that 1980 and 1981 were the most competitive years in the history of American medical school admissions, the University of Scranton placed among the top ten percent of American liberal arts colleges in the proportion of its graduates accepted into medical school for those years.

In the past two years, University of Scranton students received over 200 acceptances to medical or dental schools including many of the most prestigious in the country: Georgetown, Columbia, Rutgers, Hershey, Johns Hopkins, University of Pennsylvania, Temple, Thomas Jefferson University, George Washington University, Hahnemann, University of Pittsburgh, Creighton, St. Louis University, Medical College of Pennsylvania, New Jersey College of Medicine, Case-Western Reserve, SUNY, Emory, Buffalo, Fairleigh Dickinson, and Maryland.

In addition, other students were admitted to Schools of Osteopathic Medicine and Surgery, Podiatry, Pharmacy, Veterinary Medicine, and Graduate School programs in biology, chemistry, bio-chemistry, psychology, pharmacology and other health-related fields.

In 1978-79, 46 students were admitted to U.S. medical schools and 10 to foreign medical schools, 12 others to U.S. dental schools, and 10 others to podiatry, optometry, pharmacy, and graduate schools.

In 1979-80, 45 students were admitted to U.S. Medical and Dental Schools; another 15 were admitted to Podiatry, Pharmacy, Veterinary, and Graduate Schools.

Pre-Medical Curriculum—Most pre-medical students major in biology. The biology curriculum should be consulted for the specifics of the basic pre-medical program. Students majoring in chemistry or biochemistry at the University are also regularly admitted to medical or dental schools.

The new majors in biochemistry, biophysics, food science/nutritional chemistry, medical technology, are also important in that they provide alternative majors in second, third, or fourth year for those pre-medical students who subsequently choose not to apply to medical school.

Pre-Medical Advisor—The University's Pre-Medical Advisor is Dr. Joseph Evans. He may be consulted for more details about the University's pre-medical program.

Dr. Joseph T. Evans,
Professor of Biology,
Pre-Medical Advisor

DEPARTMENTAL PROGRAMS AND COURSES

BIOLOGY

DR. DelVECCHIO, *Chairman*

Courses in the Department of Biology are designed to achieve the following objectives: 1. to present the fundamental scientific facts and concepts which are needed for an understanding of the living world and man's relation to it; 2. to prepare students for advanced study or work in other biological fields.

The Bachelor of Science in Biology Program supplies preprofessional preparation meeting all requirements and recommendations of professional schools (medicine, dentistry, veterinary medicine). See p. 49 for data on Pre-Medical Programs. See p. 110 for the related program in Biophysics.

The department has an agreement with the Pennsylvania College of Podiatric Medicine whereby University students may transfer after three years or 90 credits at the University.

PRE-MEDICAL/PRE-PROFESSIONAL CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Biol. 1-2	General Biology I-II	4	4
COGNATE	Chem. 11-12	General & Analytical Chemistry	4½	4½
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15½	18½
		SOPHOMORE		
MAJOR	Biol. 21-22	Comp. Vertebrate Anatomy	4	4
COGNATE	Chem. 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Math. 13-14 *or* Math. 14-21	Pre-Calculus Math.—Calculus I or Calculus I-II	4	4
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Electives	3	6
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½
		JUNIOR		
MAJOR	Biol. 23, 101, 120-121	Biology Electives	4	4
COGNATE	Chem. 113	Biophysical Chemistry	4½	
COGNATE	Physics 1-2	General Physics	4	4
GE AREA II	Social/Behavior	Elective		3
GE AREA V	Phil. 110-132	Ethics—Medical Ethics*	3	3
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Elective-Intd.	Elective—Interdisciplinary Elective	3	3
			18½	20
		SENIOR		
MAJOR	Biol. 103, 105, 122-23, 150, 154	Biology Electives	4	6
GE AREA II	Social/Behavior	Electives	6	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.—T/RS	Philosophy and/or Religious Studies		3
			13	15

TOTAL: 139½ credits

*Departmental Recommendations: Chem 121, Biochemistry, in Senior year for medical school candidates; 6 credits English from Area IV; Engl 2 and Engl 7 for Area III.

BIOLOGY RESEARCH CONCENTRATION

The program below is that recommended for biology majors whose educational interests and/or career goals are in the area of research and college teaching rather than in health-related professions. Students interested in high school teaching should select the Secondary Education major with concentration in biology.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Biol. 1-2	General Biology I-II	4	4
COGNATE	Chem. 11-12	General and Analytical Chemistry	4½	4½
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS ED	Ph. Ed. 1-2	Basic Physical Education	1	1
			15½	18½
		SOPHOMORE		
MAJOR	Biology	Biology Electives	4	4
COGNATE	Chem. 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Math. 13-14 *or* Math. 14-21	Pre-Calculus Math.—Calculus I *or* Calculus I-II	4	4
GE AREA III	Communications	Electives	3	
GE AREA IV	Humanities	Electives	3	6
PHYS ED	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½
		JUNIOR		
MAJOR	Biology	Biology Electives	4	4
COGNATE	Chem. 121	Biochemistry	3	
COGNATE	Physics 1-2	General Physics	4	4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Elective-Intd.	Elective—Interdisciplinary Elective	3	3
			17	20
		SENIOR		
MAJOR	Biology	Biology Electives	4	6
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. -T/RS	Philosophy and/or Religious Studies	3	3
			13	15
			TOTAL:	138 credits

General Education recommendation:
6 credits English literature in Area IV; Engl 2 and Engl 7 for Area III.

All Senior Biology majors in the Biology Research Concentration are encouraged to take Biol. 134 for 1-3 credits. A faculty advisor should be consulted on electives.

BIOL. 1 & 2 Staff
General Biology 8 credits
A comprehensive study of the nature of living organisms, both plant and animal, their structure, function, development and relationships, including the problems of development, heredity, and evolution. 2 hours lecture and four hours laboratory each semester.

BIOL. 3 & 4 Staff
General Biological Science 6 credits
The nature of living organisms and general biological principles, as they affect man and in relation to his problems, are stressed in general terms. (GE AREA I)

BIOL. 10 Dr. Calabro
Fundamentals of Human Nutrition 3 credits
This course provides the student with a foundation in the science of nutrition and its application in dietary selection with emphasis on economic, psychological, social and cultural factors. (GE AREA I)

BIOL. 13 & 14 Dr. Anderson
Structure and Function of the Human Body 8 credits
A general study of the anatomy and physiology of the human organism emphasizing the body's various coordinated functions from the cellular level to the integrated organ systems. 3 hours lecture and 2 hours laboratory.

BIOL. 21 & 22 Fr. MacEntee
Comparative Vertebrate Anatomy 8 credits
(Prerequisite: Biology 1-2) Structure and phylogeny of vertebrate organ-systems, emphasizing mammalian structure in relation to its function. Amphioxus shark and necturus are subjected to detailed laboratory study in first semester and the cat in the second semester. 2 hours lecture and 4 hours laboratory.

BIOL. 23 Staff
Genetics 4 credits
(Prerequisite: Biology 1-2 or 3-4) Principles and theories of heredity as developed by experimental breeding, biometrical and cytological methods with their applications to plant, animal and human heredity. 3 hours lecture and 2 hours laboratory.

BIOL. 101 Dr. DelVecchio
Cellular Biology 4 credits
(Prerequisite: Biology 1-2 or 3-4) Functional dynamics of cellular organelles are explained in terms of the experimental evidence which helped elucidate cellular function. Bioenergetics, molecular evolution, and cytogenetics are also utilized. 3 hours lecture, 2 hours laboratory.

BIOL. 102 Dr. McDermott
Molecular Biology 4 credits
(Prerequisite: Biology 1-2 or 3-4) The structure and function of living cells from a molecular viewpoint; nucleic acid structure and function, enzyme structure and function, biochemical mechanisms of differentiation and molecular evolution. This course is intended to be independent from but complementary to Biol. 101. 3 hours lecture and 2 hours laboratory.

BIOL. 103 Dr. Evans
Histology 4 credits
(Prerequisite: Biology 21-22) The microscopic structure and the functioning relationships of vertebrate tissues and organs with most attention devoted to the mammal. 2 hours lecture and 4 hours laboratory.

BIOL. 105 Dr. Evans
Embryology 4 credits
(Prerequisite: Biology 21-22) Comparative study of reproduction, gametogenesis, fertilization, cleavage, morphogenesis, development of organ-systems in frog, chick and pig. 2 hours lecture and 4 hours laboratory.

BIOL. 106 Staff
Principles of Heredity 3 credits
A less technical presentation of the principles and concepts of heredity, stressing their practical applications to the problems of plant, animal and human inheritance. 2 hours lecture and 2 hours laboratory. (GE AREA I)

BIOL. 107 Staff
Anatomy & Physiology 3 credits
Fundamentals of structure and function of the human body to develop an understanding of its physical nature and operation. (GE AREA I)

BIOL. 108 Dr. Carey
Principles of Ecology 4 credits
(Prerequisite: Biology 1-2 or 3-4) Study of physical, chemical, and biological environmental factors that influence organisms and the interrelationships between organisms from individual to community level. 3 hours lecture, 2 hours laboratory.

BIOL. 110 Dr. Carey
Ornithology 4 credits
(Prerequisite: Biology 1-2 or 3-4) An introduction to both the scientific and popular aspects of bird study. Emphasis on life history, behavior, ecology, and evolution. Laboratory and field trips for identification, banding, and skin preparation. 2 hours lecture, 4 hours laboratory. (GE AREA I)

BIOL. 115 Dr. Carey
Animal Behavior 4 credits
(Prerequisite: Biology 1-2 or 3-4) Classification of behavior types, development, functional advantages and evolution of behavior, and social and physiological aspects will be studied in lower and higher organisms. 3 hours lecture and 2 hours laboratory.

BIOL. 120 Drs. Anderson & DelVecchio
General Physiology 4 credits
(Prerequisites: Biology 21-22, Chem. 101-102, Phy. 1-2) Physiological processes underlying the functioning of the animal organism. Biochemistry of protoplasm, enzymes, irritability, excitation, conduction, contractility, cellular physiology, and functions of mammalian organ-systems. 2 hours lecture and 4 hours laboratory.

BIOL. 121 Dr. Evans
Microbiology 4 credits
(Prerequisites: Biology 1-2, Chem. 11-12) Structure, function, growth, reproduction, heredity and relationships of bacteria, yeasts, molds, virus, including a brief survey of pathogens, and life cycles of parasitic microzoa, and also an introduction of disease and immunology. 2 hours lecture and 4 hours laboratory.

BIOL. 122 Dr. McDermott
Principles of Immunology 3 credits
(Prerequisites: Biology 121, Chem. 101-102) Chemical and structural basis of antigens and immunoglobulins, their interactions in non-living and living systems. Foundation and immunological consequence of species and tissue specificity.

BIOL. 123 Staff
Parasitology 3 credits
(Prerequisite: Biology 1-2) Study of various types of human, animal and plant parasites including host-parasite resistance, tolerance, and immunity. Origin and evolution of parasites also discussed. 2 hours lecture and 2 hours laboratory.

BIOL. 124 Dr. Anderson
Comparative Animal Physiology 3 credits
(Prerequisite: Biology 120) Lectures emphasize the physiological principles involved in adaptations of animals in their environment. Emphasis is placed on the similarities and differences in which related forms have solved these problems. Including such mechanisms of osmotic control, temperature regulation, nerve and muscle physiology, sensory perception, etc. 3 hours lecture.

BIOL. 125 Dr. McDermott
Introductory Medical Microbiology 3 credits
(Prerequisites: Biology 13-14; Chemistry 13-14) Fundamentals of Microbiology, including structure, function, identification, pathogenesis, epidemiology and control of microorganisms with special emphasis on human pathogens. 2 hours lecture and 2 hours laboratory.

BIOL. 126 Dr. McDermott
Virology 3 credits
(Prerequisites: Biology 1-2; Chemistry 101-102) Detailed study of the bacterial, plant, and animal viruses, including structure, chemistry, replication, genetics, origin and evolution, as well as pathogenesis of and immunity against selected viral pathogens. 3 hours lecture.

BIOL. 130 Dr. Carey
Evolution 3 credits
(Prerequisite: Biology 1-2 or 3-4) A consideration of the theories of evolution and evidences for them in plants and animals. Population genetics and the adaptiveness of various organic traits.

BIOL. 134 Staff
Undergraduate Research Variable credit
(Prerequisites: 12 credits in Biology, Chemistry 101-102, Physics 1-2) Individual problems for advanced students with sufficient background in biological and physical sciences. Subject time and credit arranged individually.

BIOL. 150 Dr. Anderson
Electron Microscopy 3 credits
(Prerequisite: Biology 1-2, Consent of instructor) Introduction to the mechanics of the electron microscope with emphasis on standard laboratory techniques, including preparation of materials, sectioning, viewing and photographic analysis. 1 hour lecture and 4 hours laboratory.

BIOL. 154 Dr. DelVecchio
Biology of the Gene 4 credits
(Prerequisite: Biology 1-2 or 3-4) A detailed study of the nature and function of the unit of heredity—the gene—with emphasis on the experimental evidence which gave rise to the present concepts of genetics of individuals, populations, races, and species. 3 hours lecture and 2 hours laboratory.

BIOL. 160 Dr. DelVecchio
Introduction to Horticulture 3 credits
Biological principles are introduced utilizing practical horticultural methods such as plant diseases and garden planning. Decorative and practical aspects of plants will also be stressed in indoor and outdoor landscaping, annual and perennial plantings, rock gardens, and bonsai. Extensive use of greenhouse. 2 hours lecture, 2 hours laboratory.

BYZANTINE STUDIES

FR. LEVKO, S.J., Ph.D., *Director*

The University of Scranton sponsors a Byzantine Studies Program directed by a Byzantine Rite Jesuit, the Rev. Dr. John Levko, associate professor of mathematics.

In an ecumenical age which is bringing together Eastern and Western Christianity, it is important to have knowledge and experience of the traditions, liturgies, literatures and theologies of the different rites. The University provides a weekly liturgy in the Byzantine Rite to which all are invited.

The Byzantine Studies Program is a multidisciplinary concentration of courses, any eight of which (24 credits) may be elected by the student in order to have the "Byzantine Studies Concentration" added to the transcript.

The concentration is open to students in all majors and may be taken as part of the Cognate requirement (with the major chairman's permission) or as part of the General Education requirement in GE Area II (Social Science), IV (Humanities), V (Theology/Philosophy). Students majoring in history, theology, and English may in addition utilize some of the courses in the major itself.

Courses presently available in the concentration are listed below:

T/RS	**130**	**Prayer** (GE V) Dr. Steele
T/RS	**132**	**Symbolic Dimensions of Faith** (GE V) Fr. Walsh
T/RS	**141**	**Introduction to Eastern Liturgies** (GE V) Fr. Levko, S.J.
T/RS	**144**	**Introduction to Byzantine Theology** (GE V) Fr. O'Shea
T/RS	**145**	**Individual in Byzantine Tradition** (GE V) Fr. O'Shea
ART	**171**	**Byzantine-Slav Architecture** (GE IV) Dr. Stauffenberg
HIST	**155-156**	**Byzantine Civilization** (GE IV) Fr. Scott, S.J.
HIST	**150-151**	**Imperial & Revolutionary Russian History** (GE IV) Dr. Earl
H/PS	**188**	**Ethnic & Racial Minorities in NE Pennsylvania** (GE II or IV) Dr. DeMichele
ENGL	**156**	**Modern Russian & Scandinavian Drama** (GE IV) Dr. Ryan
ENGL	**166**	**Evolution of Medieval Slavic East** (GE IV) Dr. Stauffenberg
ENGL	**158**	**Eastern Liturgy as Literature** (GE IV) Dr. Stauffenberg
SLAV	**107**	**Masterworks of Russian and Slavic Literature** (GE IV) Dr. Petrovic
PHIL	**145**	**Mysticism East and West** (GE V) Fr. Jarvis, S.J.

CHEMISTRY

FR. THOMAN, S.J., Ph.D., *Chairman*

The aims of the department are to train the student in analytical skills, scientific methodology and the character traits indispensable to the scientist as well as to prepare him for a position of responsibility, as an advanced student in a graduate or professional school or as a member of the staff of an educational, industrial or research institution.

In the last three academic years, seniors graduating from the department were admitted to doctoral programs at such universities as Brown, Maryland, Purdue, Pennsylvania, Case Western Reserve, SUNY-Buffalo and the Sloan-Kettering Institute, as well as to professional schools such as Georgetown Medical and Dental, Jefferson Medical and the Medical College of Pennsylvania.

The department offers five concentrations: Chemistry, Biochemistry, Food Science and Nutritional Chemistry, Chemistry-Business, and Medical Technology. The program in Chemistry is accredited by the American Chemical Society. In addition, the Chemistry and Biochemistry concentrations are offered in conjunction with the Graduate School in five-year B.S.-M.A. degree programs. The strength of the department is indicated by the latest statistics of the American Chemical Society which report that the University of Scranton is one of the largest producers of master's degrees in chemistry in the country.

CHEMISTRY CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Chem. 11-12	General Analytical Chemistry I-II	4½	4½
COGNATE	Math. 13-14	Pre-Calculus Math & Calculus I	4	4
GE AREA II	Social/Behavioral	Elective		3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15½	18½
		SOPHOMORE		
MAJOR	Chem. 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Math. 21-22	Analysis II-III	4	4
COGNATE	Physics 11-12	Elements of Physics	4	4
GE AREA II	Social/Behavior	Elective		3
GE AREA III	Communications	Electives*	6	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½
		JUNIOR		
MAJOR	Chem. 103-125	Organic Chem. III-Instrumental Analysis	5	5
MAJOR	Chem. 123-124	Physical Chemistry I-II	4½	4½
MAJOR	Chem. 127-128	Chemical Literature-Seminar	1	1
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE FREE	Intd.	Interdisciplinary Elective		3
			19½	19½
		SENIOR		
MAJOR	Chem. 130	Inorganic Chem.		3
MAJOR	Chem. 132	Undergraduate Research		3
MAJOR	Chem. Elec.	Chemistry Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil-T/RS	Electives	6	3
GE FREE	Elective	Elective	3	
			15	12

TOTAL: 139 credits

*Department recommends English 7 and German 175-176, Scientific German I-II.

BIOCHEMISTRY CONCENTRATION

The Bachelor of Science in Biochemistry Program parallels the B.S. in Medical Technology for the first two years so that opportunity is afforded the student to change from one program to the other. In both the Chemistry and Biochemistry Program, the departmental General Education Area recommendations are: 6 credits of modern language from Area III or Free Area; 3 credits of Computer Science 20 from Area III; Undergraduate Research (Chem. 132) is suggested for Biochemistry majors from Free Area if recommendation for graduate or professional school is desired.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Chem. 11-12	General Analytical Chemistry I-II	4½	4½
COGNATE	Biol. 1-2	General Biology I-II	4	4
GE AREA II	Social/Behavioral	Electives	3	3
GE AREA III	Communications	Elective*	3	
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			18½	15½
		SOPHOMORE		
MAJOR	Chem. 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Biol. 121-120	Microbiology—General Physiology	4	4
COGNATE	Math. 13-14	Pre-Calculus Math & Calculus I	4	4
GE AREA III	Communications	Electives*	3	3
GE AREA IV	Humanities	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½
		JUNIOR		
MAJOR	Chem. 103-125	Organic Chemistry III—Instrumental Analysis	3½	5
MAJOR	Chem. 127-128	Chemical Literature—Seminar	1	1
COGNATE	Phys. 1-2	General Physics	4	4
GE AREA II	Social/Behavior	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Intd.	Interdisciplinary Elective		3
			17½	19
		SENIOR		
MAJOR	Chem. 113-114	Biophysical Chemistry I-II	4½	4½
MAJOR	Chem. 121-122	Biochemistry I-II	6	3
GE AREA II	Social/Behavior	Elective		3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
GE FREE	Elective	Elective	3	
			19½	16½

TOTAL: 145½ credits

*Department recommends Engl. 7 and Scientific German I-II, Germ. 175-176.

B.S. IN MEDICAL TECHNOLOGY CONCENTRATION

The Bachelor of Science in Medical Technology degree program is designed to train and qualify students as Medical Technologists serving in hospitals or clinical laboratories. The program meets and exceeds the requirements of the American Society of Clinical Pathologists.

The program involves the satisfactory completion of the first three years of a curriculum of study indicated below) at the University of Scranton and the fourth year of Internship at a hospital having a School of Medical Technology approved by the A.S.C.P. To date the University has arranged affiliation with hospitals in such cities as Allentown, Bryn Mawr, Danville, Williamsport, Rochester, Princeton, Bethlehem, and Paterson, among others.

The curriculum for the B.S.M.T. parallels the B.S. in Biochemistry program so that the students have the option to change to the latter after three years in the technology program, should they decide on graduate studies rather than laboratory work.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Chem. 11-12	General Analytical Chemistry I-II	4½	4½
COGNATE	Biol. 1-2	General Biology I-II	4	4
GE AREA II	Social/Behavioral	Electives		3
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15½	18½
		SOPHOMORE		
MAJOR	Chem. 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Biol. 121-120	Microbiology-General Physiology	4	4
COGNATE	Math. 13-14	Pre-Calculus Math—Calculus	4	4
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110-132	Ethics—Medical Ethics	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½
		JUNIOR		
MAJOR	Chem. 121-125	Biochemistry I—Instrumental Analysis	3	5
COGNATE	Phys. 1-2	General Physics	4	4
COGNATE	Biol. 122	Principles of Immunology	3	
GE AREA II	Social/Behavior	Electives		3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Electives	3	3
GE FREE	Intd.	Interdisciplinary Elective	3	
			19	18
		SENIOR		
		Internship-Hospital		
MAJOR		Chemistry		
MAJOR		Hematology		
MAJOR		Serology		
MAJOR		Urinalysis		
COGNATE		Bacteriology		
COGNATE		Blood Bank		
			16	16

TOTAL: 142 credits

N.B. There is a $75 Internship Fee charged for each semester of senior year to cover University administrative costs. The student is not, however, charged University tuition for the credits earned in senior year. Some hospitals may charge their own tuition. The department has an outstanding record in having its students accepted into medical technology internships. It should be clear, however, that as in the case of accounting internships or medical school acceptances, medical technology internships are competitive and dependent on the student's academic record and success in the interview. The hospital is responsible for selection. A delay in beginning internship may delay a student's graduation.

CHEMISTRY-BUSINESS CONCENTRATION

The Chemistry-Business concentration combines theoretical and technical instruction in Chemistry with management training in Business. Graduates of this program will be concerned not only with chemical research and technological development but also with management problems in science-related industries.

Most chemistry majors tend to be research-oriented although almost half of the approximately 100,000 chemists employed in American private industry are engaged in work other than research and development: management, marketing and sales. This combined degree was formulated to prepare chemists to assume these latter responsibilities.

From the point of view of the business student, almost one-third of all business graduates can expect to be employed in a chemistry-related field: pharmaceuticals, plastics, petroleum, etc. Most business majors employed in such industries must develop, often on their own, the technical knowledge needed to understand their company's operations and products. A fundamental background in chemistry as provided in this concentration is a distinct advantage to individuals planning such a career.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Chem. 11-12	General Analytical Chemistry I-II	4½	4½
MAJOR	Econ. 11-12	Principles of Economics I-II	3	3
COGNATE	Math 13-14	Pre-Calculus Math—Calculus	4	4
GE AREA III	Communications	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15½	15½
		SOPHOMORE		
MAJOR	Chem 101-102	Organic Chemistry I-II	4½	4½
MAJOR	Mgt. 108-116	Org. & Mgt.—Organizational Behavior	3	3
GE AREA II	Elec.	Elective		3
GE AREA III	CMPS 21-127	Intro to Computer Science-Data Process.*	3	3
GE AREA IV	Humanities	Elective	3	
GE AREA V	T/RS 21	Introduction to Theology	3	
GE AREA V	Phil. 110	Ethics		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			17½	17½
		JUNIOR		
MAJOR	Chem. 171-128	Industrial Chemistry & Seminar	3	1
MAJOR	Acc. 3-4	Financial—Managerial Acctg.	3	3
MAJOR	Mgt. 7-8	Legal Environment I-II	2	2
COGNATE	Math. 104	Statistics		3
GE AREA II	Social/Behavior	Elective		3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 133-T/RS	Business Ethics*—Theology Elective	3	3
GE FREE	Intd.	Interdisciplinary Elective	3	
			17	18
		SENIOR		
MAJOR	Fin. 110-Mar. 107	Corporate Finance—Managerial Marketing	3	3
MAJOR	Mgt. 115	Production & Operations Mgt.	3	
COGNATE	Phys. 1-2	General Physics	4	4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	6	3
GE AREA V	Phil.-T/RS	Elective		3
			19	16

An asterisk (*) indicates departmental recommendation.

TOTAL: 136 credits

FOOD SCIENCE AND NUTRITIONAL CHEMISTRY

This program is designed to train and furnish scientists and technologists who can bring to bear the chemical background necessary to analyze, produce, and create new products and processes in foods in accordance with the requirements of sound nutrition.

It is intended that those completing this program will be prepared to enter upon an industrial career in research, development and/or production of food and agricultural products. In addition, they will be prepared to engage in graduate work towards a Master or Doctoral degree in Food Science or an allied field.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Chemistry 11-12	General Analytical Chemistry I-II	4½	4½
COGNATE	Biology 1-2	General Biology I-II	4	4
GE AREA II	Social/Behavioral	Elective		3
GE AREA III	Communications	Elective	3	
GE AREA V	Philosophy 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
GE FREE	Intd. 20	Dynamics of World Hunger		3
PHYS EDUC	Ph. Ed. 1-2	Basic Phys. Ed.	1	1
			15½	18½
		SOPHOMORE		
MAJOR	Chemistry 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Biology 121	Microbiology	4	
COGNATE	Math. 13-14	Pre-Calculus Math.—Calculus	4	4
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Phys. Ed.	1	1
			19½	15½
		JUNIOR		
MAJOR	Chemistry 121-125	Biochemistry I & Instrumental Analysis	3	5
MAJOR	Chemistry 177	Enzymology		3
MAJOR	Chemistry 172-128	Food Chemistry & Nutrition —Seminar	3	1
COGNATE	Physics I & II	General Physics	4	4
GE AREA II	Social/Behavioral	Electives	3	3
GE AREA IV	Humanities	Elective	3	
GE AREA V	Philosophy 110	Ethics	3	
GE AREA V	T/RS	Theology-Religious Studies Elective		3
			19	19
		SENIOR		
MAJOR	Chemistry 113-114	Biophysical Chemistry	4½	4½
MAJOR	Chemistry 173-4	Agricultural Chemistry I-II	3	3
MAJOR	Chemistry 175	Food Analysis		3
GE AREA IV	Humanities	Electives	6	3
GE AREA V	Philosophy-T/RS	Philosophy-Religious Studies Electives	3	3
			16½	16½

TOTAL: 140 credits

CHEM. 3 Staff
Cultural Chemistry 3 credits
An elementary study of the field of chemistry for the non-science major: concepts of structure, states of matter, modern developments, implications of the field for modern society. 3 hours lecture. (GE Area I)

CHEM. 11 & 12 Staff
General and Analytical Chemistry 9 credits
A study of the laws, theories and principles of general chemistry together with qualitative and quantitative analysis. Laboratory work covers semi-micro techniques for qualitative and quantitative analysis (gravimetric and volumetric analysis). 3 hours lecture and 3 hours laboratory each semester.

CHEM. 13 & 14 Staff
Introductory Chemistry 8 credits
A study of the fundamental concepts of general chemistry, organic chemistry and biochemistry. Laboratory work emphasizes skills and procedures relevant to the living system. 3 hours lecture and 2 hours laboratory each semester.

CHEM. 101 & 102 Staff
Organic Chemistry I-II 9 credits
(Prerequisites: Chemistry 11-12) An introduction to the chemistry of the principal aliphatic and aromatic compounds of carbon and their derivatives. Laboratory work includes investigation of the chemical properties and synthesis of the compounds studied. 3 hours lecture and 3 hours laboratory each semester.

CHEM. 103 Dr. Cann & Fr. Thoman
Organic Chemistry III 3.5-5 credits
(Prerequisites: Chemistry 101-102) A continuation of Chemistry 101-102, emphasizing the study of the major types of organic mechanisms. Laboratory work involves advanced techniques. 2 hours lecture, and 6 hours laboratory (3 hour lab for biochemistry majors).

CHEM. 113 Drs. Hart & Sallavanti
Biophysical Chemistry I 4½ credits
(Prerequisite: Chemistry 101-102) An introduction to the application of physical-chemical principles to biological problems. This involves aqueous solutions, colloidal chemistry, thermodynamics, electro-chemistry, chemical kinetics and nuclear chemistry. Laboratory work involves mainly experiments dealing with colloidal phenomena, chemical kinetics and nuclear chemistry. 3 hours lecture, 3 hours laboratory.

CHEM. 114 Dr. Sallavanti
Biophysical Chemistry II 4½ credits
(Prerequisite: Chemistry 113) A study of the bioenergetics, enzyme kinetics and cryobiochemistry as related to cellular phenomena. Laboratory work includes enzyme kinetics, energetics and special projects. 3 hours lecture, 3 hours laboratory.

CHEM. 121 Staff
Biochemistry I 6 credits
(Pre or corequisites: Chemistry 102 and 113 or 123) Principles of biochemistry and biophysical chemistry including enzyme kinetics. A study of the chemical nature of lipids, carbohydrates, proteins, nucleic acids and enzymes including relationships between vitamins, hormones and inorganic compounds. 3 hours lecture and 6 hours lab. (Lab required of biochemistry majors.)

CHEM. 122 Staff
Biochemistry II 6 credits
(Pre or corequisites: Chemistry 102 and 113 or 123) A study of the metabolism, digestion and absorption of carbohydrates, lipids, amino acids and proteins, including energy transformations together with the role of enzyme systems in the above processes. 3 hours lecture and 6 hours optional lab.

CHEM. 123 & 124 Drs. Hart & Sallavanti
Physical Chemistry I-II 9 credits
(Prerequisites: Chemistry 11-12, Mathematics 21-22) A study of the physicochemical properties of matter and the dynamics of chemical reactions. Laboratory experiments illustrate the principles studied. 3 hours lecture and 3 hours laboratory each semester.

CHEM. 125 Dr. Vinson
Instrumental Analysis 5 credits
(Prerequisite: Chem. 113 or 123) Instrumental methods of analysis consisting of theory and application of such instrumental techniques as spectroscopy, polarography and instrumental titrimetry. Laboratory stresses instrumental analysis and techniques. 2 hours lecture and 6 hours laboratory.

CHEM. 128 Staff
Seminar 1 credit
Current topics in chemistry, biochemistry, food science and chemistry-business are prepared and presented by the students. Discussion and criticism follow.

CHEM. 129 Dr. Sallavanti
Physical Chemistry III 3 credits
(Prerequisites: Chemistry 123-124) Special topics including classical and quantum statistics and

thermodynamics, molecular and solid state structure and quantum chemistry. 3 hours lecture.

CHEM. 130 Dr. Sallavanti
Inorganic Chemistry 3 credits
(Prerequisites: Chemistry 123-124) Descriptive chemistry of selected elements and their compounds correlated with the periodic table physical properties, atomic, and molecular structure, bonding and the ligand theory. 3 hours lecture.

CHEM. 132 Staff
Undergraduate Research 3 credits
(Prerequisites: Chemistry 102, 113 or 123, 127) Individual study and research in connection with a specific chemical problem. Results must be written as thesis and defended before the department.

CHEM. 147-148 Drs. Hart & Sallavanti
Intermediate Physical Chemistry 6 credits
A review of the fundamentals of chemical principles, and a treatment of the mathematics requisite for such review. This course is designed for prospective graduate students in the M.S. and M.A. programs in Chemistry with a deficiency in Physical Chemistry and Calculus. 3 hours lecture each semester.

CHEM. 150 Staff
Chemistry and Action of Drugs 3 credits
Introductory study of physiological and psychological effect of commonly used drugs on humans. Drug action in relation to molecular biological structure and function. No prerequisites. 3 hours lecture.

C/LE 151 Fr. Thoman
Forensic Chemistry 3 credits
No prerequisite. Designed for law enforcement majors as well as science majors, this is a study of the rules of evidence and the position of the expert scientific witness in law, followed by a review of the uses of scientific, and particularly chemical, evidence in various phases of the investigation and trial of criminal actions. (Area I)

CHEM. 153 Fr. Thoman
Chemical Toxicology 3 credits
(Prerequisites: Chemistry 101-102) The nature, mode of action and methods of counteracting substances which have an adverse effect on biological systems, especially human. Medical, industrial, environmental and forensic aspects will be dealt with. 3 hours lecture.

CHEM. 171 Staff
Industrial Chemistry 3 credits
A review of chemical operations and unit or batch processes common to the industry. Econometric analysis involving supply-demand, productivity, commodity prices and costing is an important area covered. Measures of productivity and patent activity. 3 hours lecture.

CHEM. 172 Staff
Food Chemistry and Nutrition 3 credits
(Prerequisites: Chemistry 102, Biology 121) The chemistry and nutritional characteristics of natural and processed foods. This includes carbohydrates, lipids, proteins, minerals, vitamins, food additives and enzymes. 3 hours lecture.

CHEM. 173 Staff
Agricultural Chemistry I 3 credits
(Prerequisite: Chemistry 113 or 124) The photosynthetic aspects and biochemical energetics in plant production. The chemistry and use of fertilizers and pesticides. The relationships between food production and various methods in pest control and soil enrichment.

CHEM. 174 Staff
Agricultural Chemistry II 3 credits
(Prerequisite: Chemistry 113-114 or 123-124) Physical and chemical properties of soils and their improvement by physical, chemical and biological means. The relationships between naturally occurring plant toxins, mycotoxins and food production.

CHEM. 175 Drs. Dreisbach & Vinson
Food Analysis 3 credits
The course will involve both the "official methods of analyses" and newer research methodologies. Materials to be analyzed include food vitamins, cosmetics and drugs. One hour lecture and 4 hours laboratory.

CHEM. 177 Staff
Enzymology 3 credits
A course in the chemical nature of enzymes with relation to mechanisms of enzyme action and kinetics, purification and identification of enzymes and isoenzymes. Biochemical and physiological aspects of enzymes in living systems. 3 hours lecture.

COMMUNICATIONS

PROF. WARNER, *Chairman*

This program explores the range of the entire communications process with courses which encompass both communication and mass media studies. The communication courses are designed to develop the analytical and reflective capabilities of its students, and are supplemented with elective media studies in broadcasting, journalism (both print and electronic) and other developing fields. In addition, elective areas provide opportunity for professional off-campus experience for those who meet departmental qualifications.

The goals of the department are to develop in its students analytical proficiency, reflective competence and methodological skills necessary to foster those qualities essential for responsible involvement within the communications field. Communications studies are structured to prepare students for graduate study as well as for career entry.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Comm. 51-52	Inquiry—Interpersonal Communication	3	3
MAJOR	Elective	Elective		3
GE AREA II	Soc. 21	Principles of Sociology*	3	
GE AREA II	Psych. 23	Fundamentals of Psychology*		3
GE AREA IV	Humanities	Electives†	3	6
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21-Elective	Introduction to Theology—Theo. Elec.	3	3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	19
		SOPHOMORE		
MAJOR	Comm. 105	Introduction to Linguistics	3	
MAJOR	Comm. 104 or Phil. 28	Logical & Rhetorical Analysis or Logic	3	
MAJOR	Electives	Electives	3	6
COGNATE	Electives	Electives	3	3
GE AREA I	Physics 25-26	Role of Electronics in Communication*	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Elective	Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19	19
		JUNIOR		
MAJOR	Comm. 107-108	Comm. Theory—Internship	3	12
MAJOR	Elective	Elective	3	
COGNATE	Elective	Elective	3	
GE AREA I	Comm. 9	Biophysics of Communication*	3	
GE AREA IV	Humanities	Electives	6	
			18	12
		SENIOR		
MAJOR	Comm. 108-109	Communication Ethics—Seminar	3	3
COGNATE	Electives	Electives	9	6
GE AREA IV	Humanities	Elective		3
GE AREA V	T/RS-Phil.	Elective	3	
GE FREE	Intd.-Electives	Intd. Elective—Electives	3	6
			18	18

*Asterisk indicates Recommended Courses.

†For freshman GE Area IV, at least one semester of History 1 or History 3 is recommended.

TOTAL: 139 credits

COMM. 9 Dr. Fahey
Biophysics of Communication 3 credits
Designed primarily for Communication majors, this course considers waves, energy and information theory. Chemical messages, biological information processing in audio, visual and internal modes. Brain lesions, input saturation and problems in communication.

COMM. 51 Staff
Communication Inquiry 3 credits
An investigation of the nature of human communications and an introduction to the writing of communications scholars in order to expose the thought, the logic and the criteria of the field. Emphasis placed on importance of interdisciplinary approach to an area of study that touches virtually all human activity.

COMM. 52 Fr. Hamernick & Dr. Wilkie
Interpersonal Communication 3 credits
(Prerequisite: Comm. 101) An exploration of essential components of interpersonal communication, emphasizing the confluence of these details into a single, continuing event. Attention is called to the significance of this process as one in which all must participate, not only for personal development, but also for effective negotiations with others.

COMM. 105 Dr. Rakauskas
Introduction to Linguistics 3 credits
An attempt to understand the systematic ways in which human communication is achieved. A particular emphasis will be put on an investigation of the findings of linguistic scholarship, especially with regard to the workings of the English language.

COMM. 109 Staff
Senior Seminar 3 credits
In order to provide majors with the opportunity of synthesizing their varied educational experiences, this seminar will be interdisciplinary in nature. The first semester is devoted to individual research topics designed to help the student acquire expertise in the communication field of his choice. The second semester will utilize speakers from various media in order to acquaint students with problems and opportunities of those fields. For Senior communications majors only.

COMM. 111 Drs. Stauffenberg & Rakauskas
Advanced Composition 3 credits
(Prerequisite: English 7 or Exemption) The purpose of this course is to review, practice and apply the principles of a rhetoric of order, stressing invention, disposition, style, tone and theme. (GE Area III)

COMM. 114 Fr. J.J. Quinn
History of Cinema 3 credits
A study of the historical development of motion pictures. Practitioners in America and throughout the world are treated in this concise history of cinema. Film screening fee: $10.00 (GE Area IV)

COMM. 115 Fr. J.J. Quinn
The Art of Cinema 3 credits
The study of the artists, technicians and businessmen who make films. Taped interviews of internationally famous film makers, as well as an analytic scrutiny of modern films, develop students' intelligent, active participation in the major art form in modern culture. Film screening fee: $10.00 (GE Area IV)

COMM. 116 Fr. J.J. Quinn
The Narrative Film 3 credits
A study of the substance and structure of the most popular film genre in short, experimental, and feature length. Special concentration in the translation of literature (stories, novels, plays) to screen is featured. Film screening fee: $10.00. (GE Area IV)

COMM. 117 Fr. J.J. Quinn
Film Criticism 3 credits
A study of the grammar, poetics, rhetoric, and aesthetic of film critics constitute the heart of this course. Film screening fee: $10.00 (GE Area IV)

COMM. 118 Dr. Zahler
Theater Practicum 3 credits
(Prerequisite: English 7 and an additional English course from 20-27 sequence.) A course that permits the student to specialize in a period of particular playwright's work and to produce a representative play. Acting, make-up, lighting, and set design. (GE Area III)

COMM. 121 Dr. McInerney
Man and Mass Media 3 credits
A study of the development of films, radio, and television in 20th Century America; the basic techniques by which they communicate and the ways in which they interact with other factors to shape our culture. (GE Area III)

COMM. 122 Dr. Wallace
Mass Media and the Law 3 credits
Laws, rules and regulations which apply to broadcasting media; historical development, present-day applications, and future implications of self-regulation, FCC regulation, and other forms of control and protection.

COMM. 123 Dr. Wallace
Mass Communications Management 3 credits
The unique role of the manager in mass communications warrants this study of typical management decisions which range from content consideration to sales to contract negotiations with personnel.

COMM. 124 Dr. Wallace
Audience Analysis 3 credits
This radio broadcasting research course investigates the dynamics of radio—when and how it has what impact upon whom. The pursuit of measurable feedback will necessarily expose students to the latest techniques in audience pre- and post-testing procedures.

COMM. 125 Dr. Wallace
International Communication 3 credits
(Prerequisite: Engl. 2 or exemption) The press and broadcasting systems of a number of selected nations are studied in light of the political, social and economic forces which shape the systems. (GE Area II)

COMM. 131 Dr. Wallace
Radio Programming and Production 3 credits
Delineates fully the evolving roles of radio-producer-directors. Laboratory assignments explore the entire range of conventional radio program types. Lab fee: $20.00

COMM. 132 Dr. Wallace
Radio Practicum 3 credits
Surveys all aspects of a radio station: audio control, equipment operation and maintenance, programming, and governmental regulation. This course prepares students for the FCC third-class radio-telephone operator's examination. The University-operated radio facility, WYRE, will function as the primary technical resource for the course. Lab Fee: $20.00.

COMM. 141 Prof. Warner
Television Production 3 credits
"Behind the scenes" operation of television production. Included are discussions of types of shows, rationale for each, and production techniques peculiar to each. An opportunity to produce, tape and direct a show using one of the techniques will be a major class project. Lab Fee: $20.00 (GE Area III)

COMM. 142 Prof. Warner
Educational Television 3 credits
Use of the television media for instructional purposes both public and classroom. Current usage by Educational Television Stations and secondary schools including both broadcasting and closed circuit television. Types of educational programs are evaluated. A final classroom instructional situation is presented by each student in his own discipline. Lab Fee: $20.00 (GE Area III)

COMM. 143 Prof. Warner
Advanced Television Production 3 credits
Building upon the foundation acquired in Comm. 141, this course enables students to pursue specialized projects under supervision in order to maximize their technical expertise. Lab Fee: $20.00.

COMM. 144 Dr. McInerney
Writing for Television 3 credits
Introduction to the script format for television documentaries and for dramatic productions of varying length. Students are required to master the "technique" of preparing TV scripts. Four major assignments and several short "learning projects" will be required.

COMM. 150 Fr. Hamernick
Broadcasting 3 credits
A study of those forces which produce any broadcast system: physical, historical, economic and social. Emphasis is placed on demonstrating how those forces converge to compose broadcasting in the United States. (GE Area III)

COMM. 151 Staff
Introduction to Journalism 3 credits
(Prerequisite: English 7 or Exemption) Organization and functions of newsgathering. Relationships among different news media, responsibilities of journalistic institutions and role of press in society; student is introduced to newsgathering and newswriting techniques employed in various media. (GE Area III)

COMM. 152 Staff
Advanced Print Journalism 3 credits
(Prerequisite: Comm. 151) News evaluation, copy editing, headline writing, interviewing, makeup, individual consultation on writing assignments, continuing study of professional news and feature writing, observation of modern newspaper processing (GE Area III)

COMM. 155 Dr. Wallace
Advanced Broadcast Programming 3 credits
Examination of current trends in radio programming. Emphasis will be accorded radio drama and docu-drama, as well as advertising and public relations campaigns. Lab Fee: $20.00.

COMM. 156 Dr. Wallace
Radio Journalism 3 credits
(Prerequisites: Comm. 151 & either Comm. 131 or 132) Newswriting and reporting, interviewing, and investigating for documentary purposes will comprise the major areas of study. Lab Fee: $20.00.

COMM. 157 Tom Powell
Television Journalism 3 credits
(Prerequisite: Comm. 151) Broadcast journalism skills are refined through assignments and classroom critiques. Production techniques including film and tape editing are discussed and the student is introduced to the techniques of assembling newsprograms. (GE Area III)

COMM. 158 Tom Powell
Advanced TV Journalism 3 credits
(Prerequisite: Comm. 151 or 157) Network and local station documentary broadcasts and a "hands on" opportunity to work with film and tape in the production of mini-documentaries and full-length programs. Some course projects may be accepted for broadcast by a local television station. Lab Fee: $20.00.

COMM. 161 Dr. Wilkie & Mr. Costello
Advertising 3 credits
Advertising as a persuasive tool. Major topic areas: research, concept and design, media selection, and evaluation.

COMM. 171 Dr. Conover & Mr. Costello
Public Relations 3 credits
(Prerequisite: Comm. 151) Introduction to the field of organizational public relations. Through the case method, the student obtains an overview of the public relations profession and an appreciation of policy-making decisions.

COMM. 198 Staff
Communications Internship 3-12 credits
Junior or senior majors are encouraged to engage in an internship related to career interests. Prior approval is required.

COMPUTER SCIENCE

DR. BEIDLER, *Chairman*

A computer science major studies the methods of storing, representing, and transforming information using a digital computer. The strength of the department is indicated by the $250,000 NSF grant received last year for academic computer based problem solving.

Because of the diverse applications of computing, a limited set of cognates is not designated. The normal cognates are mathematics, statistics, and various areas in business. Every computer science major must fulfill certain cognate requirements. These requirements are one mathematics sequence (Math 3-4, Math 13-14, or Math 14-21), one statistics course (normally Math 44, Math 102, or Math 104), and one business sequence (normally Acc. 3-4).

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	CMPS 20-25	Introduction I-II	3	3
COGNATE	Math. 3-4 or 14-21	Quantitative Methods or Calculus I-II	3/4	3/4
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16/17	16/17
		SOPHOMORE		
MAJOR	CMPS 100-110	Assembly Lang. Prog.—Data Structures	3	3
COGNATE	Elective	Electives	3/4	3/4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	T/RS	Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16/17	16/17
		JUNIOR		
MAJOR	CMPS 101-Elective	Systems Organ. & Programming—Electives	3	9
COGNATE	Electives	Electives	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE FREE	Intd. Elec.-Elective	Interdisciplinary Elective—Elective	3	3
			15	18
		SENIOR		
MAJOR	CMPS 120-Electives	Computer Projects-Electives	6	6
COGNATE	Electives	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
			15	15

TOTAL: 127-131 credits

General Education recommendation: for AREA III, English 2 (Oral Communication Center) and English 7 (Writing Center) are recommended except for students with Advanced Placement in English or extensive high school experience in speech and writing.

CMPS. 20 Staff
Introduction to Computer Science I 3 credits
Introduction to computer programming using the PLUS (Structured FORTRAN) pre-processor, algorithms and programming techniques. Applications from mathematics and the natural sciences emphasized. Lab. Fee: $40.00.

CMPS. 21
Programming for Business and Social Science Staff 3 credits
This course is basically the same as CMPS. 20 except that applications from the social sciences, business, and accounting will be emphasized. Lab. Fee: $40.00.

CMPS. 25 Prof. Meinke
Introduction to Computer Science II 3 credits
An introduction to advanced software engineering concepts using PASCAL and structured programming; data structures, assembler, computer organization, and operating systems. Prerequisite: CMPS 20 or 21. Lab fee: $40.00.

CMPS. 100 Dr. Beidler
Assembly Language Programming 3 credits
An introduction to assembler programming. Among the topics discussed will be machine organization, the representation of data, the assembler, input-output routines and the use of macros. Pre: CMPS. 20/21. Lab. Fee: $40.00.

CMPS. 101 Prof. Meinke
System Organization and Programming 3 credits
The analysis and design of computer systems including debugging, operating system design, and the implementation of multiprogramming. Prerequisite: CMPS. 100.

CMPS. 110 Dr. Beidler
Data Structures 3 credits
The representation and transformation of information. This course stresses the interrelation between data structure and program structure. Included will be an elementary discussion of compiler structure. Prerequisite: CMPS. 100.

CMPS. 120 Dr. Beidler
Computer Projects 3 credits
In this course students present computer projects of their choice to be evaluated by the instructor and their fellow students. Seniors only.

CMPS. 123 Prof. Taylor
Operations Research 3 credits
Introduction to the basic mathematical modeling and simulation techniques used in the business environment. Use of basic operations-research techniques including linear and dynamic programming, simulation, queuing theory. Pre: CMPS. 20/21 and Math 4 or 14.

CMPS. 125 Dr. Beidler
Artificial Intelligence 3 credits
Problem solving under uncertainty, Heuristic Programming Techniques, Tree speed-up techniques, analysis of chess and other non-well determined games, learning mechanisms. Pre.: CMPS. 110

CMPS. 126 Prof. Plonsky
COBOL Programming 3 credits
Introduction to ANSI standard COBOL for computer science and business majors. Programming approach to COBOL and use of sequential files. Pre: CMPS. 20/21. Lab Fee: $40.00

CMPS. 127 Prof. Taylor
Information Systems 3 credits
Introduction to concepts and practices of information processing. Computerized system requirements and techniques in providing appropriate decision-making information to management. Pre: CMPS. 20/21. Fee: $40.00

CMPS. 130 Staff
Numerical Analysis 3 credits
A survey of computer-oriented techniques for integration, differentiation, matrix computation, solution of simultaneous equations, and analysis of errors. Prerequisite: CMPS. 20/21, Math 14.

CMPS. 133 Dr. Beidler
Computer Graphics 3 credits
Introduction to equipment and techniques used to generate graphical representations by computer. Description and use of vector-refresh, vector-storage, and raster-scan graphics plotter and CRT pseudographics. Prerequisite: Math 13 and CMPS. 110.

CMPS. 136 Prof. Plonsky
Advanced COBOL 3 credits
Continuation of CMPS. 126 in COBOL programming language to data processing problems. Special procedure verbs, Report-Writer feature, magnetic tape, direct access storage devices. Pre: CMPS. 126. Lab Fee: $40.00

CMPS. 138 Prof. Taylor
Business Systems Analysis 3 credits
(Prerequisite: CMPS. 127) A study of the development of systems analysis techniques including current methods which emphasize a structured programming approach.

CMPS. 140 Prof. Fanning
Foundations of Computer Science 3 credits
Foundations of computer science taken from logic, recursive functions theory, turing machines, automata theory, formal language theory. Pre: CMPS. 110 or Math 108.

CMPS. 145 Prof. Meinke
Basic Computer Architecture 3 credits
Processor/memory/switch and instruction set processor/register transfer level; digital logic design. Prerequisite: CMPS. 100 & 110.

CMPS. 150 Prof. Meinke
Programming Languages 3 credits
Practical and theoretical aspects of programming languages, compilers, and compiler writing. Prerequisite: CMPS. 110.

CMPS. 160 Dr. Beidler
Formal Language Theory 3 credits
Development of a precise notion of computability and relationship to turing computable and recursive functions. Pre: CMPS. 110.

CRIMINAL JUSTICE/LAW ENFORCEMENT

PROF. RIELLY, *Chairman*

The BS Degree program in Criminal Justice/Law Enforcement has the following objectives: 1. to prepare students for careers in law enforcement at the local, state or federal levels (FBI, Departments of Defense, Treasury, Justice); 2. to prepare students for careers in the field of correction and rehabilitation: parole, prisons, juvenile delinquency, etc.; 3. to provide students with academic preparation for advanced study in law, criminology, public administration and related fields. The Law Enforcement major is administered by the Department of Sociology/Criminal Justice, which also administers the Sociology and Gerontology degree programs.

An Advisory Board of Community leaders working in the field of law enforcement and criminal justice has been established to work with University officials and faculty in the areas of curriculum and internships.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Soc. 21—CJ 20	Principles of Sociology—Intro. to Criminal Justice	3	3
COGNATE	Psych. 23	Fundamentals of Psychology	3	
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	S/CJ 123-CJ 112	Law and Society—Criminal Research	3	3
MAJOR	S/CJ 103-113	Criminology—Juvenile Delinquency	3	3
COGNATE	Pol. Sci. 101	American National Government	3	
COGNATE	Psych. 25	Human Behavior		3
GE AREA III	Elective	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	CJ/LE Elec.	Criminal Justice/Law Enforcement Electives	3	3
COGNATE	Pol. Sci. Elec.	Political Science Electives	3	3
COGNATE	Soc. Sci. Elec.	Social Science Electives	3	3
GE AREA I	Acc. 3-4*	Financial—Managerial Accounting	3	3
GE AREA IV	Humanities	Elective	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Elective	Elective	3	
			18	15
		SENIOR		
MAJOR	CJ/LE Elec.	Criminal Justice/Law Enforcement Electives	3	3
MAJOR	CJ/LE 198/99-Elec.	Practicum/Electives	3	3
COGNATE	Soc. Sci. Elec.	Social Science Elective		3
GE AREA IV	Humanities	Elective	3	
GE AREA V	T/RS-Phil.	Philosophy and/or Religious Studies	3	3
GE FREE	Elective-Intd.	Elective—Interdisciplinary	3	3
			15	15

*Departmental Recommendation.

TOTAL: 127 credits

General Education Recommendations:

In GE AREA I, the department recommends 12 credits of accounting for those contemplating FBI service; otherwise, Chem. 150, Chemistry and Drug Action, and C/LE 151, Forensic Chemistry. In GE AREA III, CMPS. 21 is highly recommended. In GE AREA IV, the department recommends Hist. 1-2, History of the U.S.; H/PS 124-25, American Political and Social Thought; Engl. 112, Black Literature. In GE AREA V, T/RS 150, Church and Contemporary Social Issues.

In the COGNATE, the department recommends Pol. Sci. 105, State Government; Pol. Sci. 106, Local Government; Pol. Sci. 127, American Intergovernmental Relations; Psych. 145, Abnormal Psychology; Soc. 106, Community Organization; Soc. 107, Child Welfare; Soc. 111, Urban Sociology; Soc. 114, American Minority Groups; Soc. 148, Social Psychology.

CJ. 20 Profs. Friedrichs, Baker
Introduction to Criminal Justice 3 credits
A foundation course examining problems in the study of crime and criminal justice, basic elements of criminal law and constitutional rights, and the functions of, as well as the relationship between, major components of the criminal justice system; agencies and role of law enforcement; prosecution; the judicial process; and corrections.

S/CJ. 103 Profs. Friedrichs, Rielly
Criminology 3 credits
Crime as a form of deviant behavior; nature and extent of crime; past and present theories; evaluation of prevention, control and treatment programs.

S/CJ. 104 Prof. Friedrichs
Victimology 3 credits
An examination of the causes and consequences of crime victimization. The recent emergence of the study of the victim, the types and circumstances of victimization, and the nature of the criminal justice system's response to crime victims are considered, along with the ethical and practical dimensions of crime victimization.

CJ. 112 Prof. Rielly
Criminological Research 3 credits
Survey of methods and techniques for achieving interpretable results in research in the criminal justice field; research design; data collection.

S/CJ. 113 Prof. Rielly, Dr. Talamini
Juvenile Delinquency 3 credits
Nature and extent of delinquency: competing explanatory models and theories; evaluation of prevention, control, and treatment programs.

S/CJ. 115 Profs. Rielly, Baker
Organized Crime Patterns 3 credits
Historical survey of organized crime in America; areas of influence; remedial practices and control.

S/CJ. 116 Prof. Friedrichs
Crime, Deviance & Respectability 3 credits
An analysis of illegal and deviant patterns of behavior in respectable middle and upper class circles. Crime is examined in the context of legitimate occupations, the activities of major businesses and corporations, and the policies and practices of government officials. Patterns of public response and changing legal trends are studied.

S/CJ. 117 Prof. Friedrichs
Sociology of Deviance 3 credits
Critical examination of theories and empirical studies of social deviance, focusing upon the formulation and application of deviant labels, organizations relating to deviance, and deviant behavioral patterns. Special attention given to non-criminal forms of deviance.

S/CJ. 122 Staff
Special Topics in Criminal Justice 3 credits
Courses designed to meet specific needs of groups of students or courses offered on trial basis to determine the value of placing them into regular curriculum.

S/CJ. 123 Prof. Friedrichs, Dr. Talamini
Law and Society 3 credits
The relationship between law and society, or the interaction of legal and social variables. Examines jurisprudential and social theories of law; types of legal systems; ideology and legitimacy of law; development of law; the role of the legal profession; legal behavior and decision-making; and law and social change.

LE. 124 Prof. Baker
Principles of Criminal Investigation and Identification 3 credits
Course designed to teach investigators in-depth techniques in the handling and analysis of physical evidence; interviewing and interrogation; the preservation and admission of evidence in criminal cases.

CJ. 125 Atty. Cimini
Criminal Justice Process 3 credits
The development and structure of the criminal justice system, emphasizing its effects on offenders and society, and examining attempts to modify it.

LE. 126 Atty. Cimini
Criminal Law 3 credits
The legal definition of crime and defenses; purpose and functions of substantive criminal law; historical foundations; the limits of the criminal law.

S/CJ. 128 Atty. Cimini, Prof. Rielly
Penology: The American Correctional System 3 credits
Analysis and evaluation of contemporary correctional systems; theories of punishment; discussion of recent research concerning the correctional institution and the various field services; the history of corrections in Pennsylvania.

LE. 129 Prof. Baker
Criminal Justice Management 3 credits
Basic principles and practices of administration and their application to law enforcement. Relationship of theoretical administrative concepts and practical police problems.

S/CJ. 132 Prof. Friedrichs
The American Court System 3 credits
The court as a key component of the criminal justice system is examined. Philosophical, historical, comparative and typological perspectives are reviewed; the organization, structure and procedures of the court are analyzed, and roles of the major courtroom participants are explored. Court administration, planning and reform is critically assessed.

S/CJ. 133 Atty. Cimini
Principles of Evidence 3 credits
An examination of the law of evidence as it pertains to the trial of a criminal case. A discussion of the common law, pertinent statutes, judicial opinions, and rules such as the federal rules of evidence, as these relate to such concepts as: direct and circumstantial evidence; opinion testimony, experts and exhibits; competence, relevance and materiality; privileges, hearsay and its exceptions; judicial notice; the exclusionary rule.

S/CJ. 134 Atty. Cimini
Trial, Jury and Counsel 3 credits
A consideration of the rights guaranteed by the Sixth Amendment to the Constitution of the United States, surveying constitutional provisions, statutes, court rules and cases concerning the right of a criminal defendant to a speedy and public trial, to trial by jury, and to the assistance of counsel.

LE. 140 Prof. Baker
Industrial Security 3 credits
Analyzes the past and present roles of non-governmental actors in the justice process focusing on their legal and sociological implications; private security operations, investigative methods, management and supervision.

LE. 142 Prof. Baker
Public Safety Administration 3 credits
An overview of the safety field—its philosophy, disciplines and research. An examination of the causes and extent of accidents. The principles and methods of prevention will be examined.

S/CJ. 145 Atty. Cimini
Civil Liability 3 credits
An examination of the law enforcement officer or employee as a defendant in a civil suit arising from the scope of his employment. Liability based upon tort law, as well as upon state and federal civil rights statutes, is examined, along with a consideration of the typical defenses; e.g., non-involvement, outside the scope of employment, immunity, official discretion and good faith performance.

C/LE. 151 Fr. Thoman
Forensic Chemistry 3 credits
A study of the rules of evidence and the position of the expert and scientific witness in law, followed by a review of the use of scientific, and particularly chemical, evidence in various phases of the investigation and trial of criminal actions. No prerequisite.

CJ. 191-192 Staff
Independent Study in Law Enforcement 3 credits
Directed projects and surveys in criminal justice, law enforcement, and corrections designed to give the student academic flexibility. Prerequisite: consent of the Chairman and the Instructor directing the study.

CJ. 198 Prof. Baker
Field Practicum Experience 3 credits
Supervised field work in an approved criminal justice setting taken preferably in junior and senior year. Designed to provide the student with an opportunity to apply academic training in practical situations. Prerequisite: consent of campus Internship Supervisor.

CJ. 199 Prof. Rielly
Field Methods in Criminal Justice 3 credits
Critical examination of issues and practices for field study in law enforcement; introduction to analytic techniques, data processing resources, and preparation of research reports. Prerequisite: CJ. 198.

EDUCATION

DR. KIMBLE, *Chairman*
PROF. CURTIS, Director of Student Teaching

The aims of the Department of Education are to develop in the individual the competencies necessary to enter the teaching profession and to offer a program of courses that leads to certification as a secondary school teacher.

The Department of Education offers teacher education concentrations leading to certification in:

Biology	General Science	Physics
Chemistry	German	Social Studies
Communications	Latin	Spanish
English	Mathematics	
French	Mathematics-Physics	

The education program is accredited by the Pennsylvania Department of Education and the National Council for Accreditation of Teacher Education. These accreditations and reciprocity agreements between Pennsylvania and selected states assure that courses taken will be considered for certification in most states.

Students will be accepted for teacher education only with the approval of the Department of Education. Pre-entrance interviews may be required.

A student may enter the education program either as a major in education or in his/her subject area. However, in both cases the student must be approved by the Department and follow the prescribed courses if he/she desires certification. Specific requirements for each subject matter concentration are available from the Education Department. Students will be given a curriculum guide upon approval of their entrance into the program.

Double majors between a subject area and education may be arranged in the case of exceptional students. These must be approved by both departments involved and by the dean. A specific program will be designed in each individual case. Double certification programs may also be arranged to improve the student's employment potential.

The Requirements and Curriculum Guide provides the rules and regulations which must be followed to remain a candidate for certification and graduation.

EDUC. 21 Staff
The Foundations of Education 3 credits
The characteristics of the public school system in the United States, the role of education in contemporary society, and current issues related to education are presented. (GE Area II)

EDUC. 22 Staff
Educational Psychology 3 credits
The psychological basis of teaching strategies, classroom environment, learning, motivation, reinforcement, and evaluation will be taught. (GE Area II)

EDUC. 23 Staff
Sophomore Field Experience 1 credit
(Prerequisite: Education 22) This experience will be closely associated with Education 21 and 22. Projects will be assigned to be carried out in the secondary schools through observation and contact.

EDUC. 24 Staff
Junior Field Experience 1 credit
(Prerequisite: Education 103) Close association with the Education 103 and 104 courses will be maintained with an emphasis on studying teaching techniques and with involvement in teacher activities in area secondary schools.

EDUCATION CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Teaching Major	Introductory Courses	3	3
COGNATE	Educ. 21	Foundations of Education		3
GE AREA I	Nat. Sci./Quant.	Elective	3	
GE AREA II	Psych. 23-25	Fundamentals of Psych.*-Human Behavior*	3	3
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Teaching Major	Required or Elective Courses	6	6
COGNATE	Educ. 22-23	Education Psych.-Sophomore Experience	3	1
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA II	Soc. 21-22	Basic Sociology-Social Problems*	3	3
GE FREE	Elective	Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	17
		JUNIOR		
MAJOR	Teaching Major	Required or Elective Courses	6	6
COGNATE	Educ. 103-104	General Methods & Planning—Subject Method	3	3
COGNATE	Educ. 24-107	Junior Experience—Reading in Secondary School	1	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	Educ. 106	Philosophy of Education*		3
GE FREE	Intd.	Interdisciplinary Elective	3	
			19	18
		SENIOR		
MAJOR	Teaching Major	Electives		6
COGNATE	Educ. 105	Student Teaching	9	
COGNATE	Educ. 113	Classroom Management	2	
COGNATE	Educ. 111	Professional Seminar	1	
GE AREA III	Communications	Elective		3
GE AREA V	Phil.-T/RS	Philosophy and/or Theology Electives		6
GE FREE	Electives	Electives		3
			12	18
			TOTAL:	132 credits

*Departmental recommendations
English 2 and English 7 are recommended
N.B. Students in the teaching areas of math and science will take humanities (GE AREA IV) courses in place of Natural Science/Quantitative (AREA I) courses where noted above.

EDUC. 103 Prof. Curtis
General Methods and Planning 3 credits
(Prerequisite: Education 22) Methodology for setting direction in the classroom, creating a learning situation, developing the content, reinforcing and evaluating will be covered. Students will be involved with developing plans for teaching. (GE Area III)

EDUC. 104 Staff
Specific Subject Methods 3 credits
(Prerequisite: Education 103) Utilizing knowledge of planning and teaching generally, students will be guided in the analysis of specific content and techniques for teaching that content. They will demonstrate their ability to carry out plans in "micro" teaching experiences. (GE Area III)

EDUC. 105 Staff
Student Teaching 9 credits
(Prerequisites: Education 103 and 104) Involvement in actual teaching for ten weeks in an area secondary school under the supervision of classroom teachers and University supervisors. Admission to student teaching by permission of the Education Department only.

EDUC. 106 Staff
Philosophy of Education 3 credits
An examination of representative modern systemic philosophies of education with a critical analysis of the answers that each system of philosophy provides to the important questions concerning the nature of knowledge, value, man and society. (Recommended as GE Area V elective for education majors)

EDUC. 107 Prof. Williams
Reading in the Secondary School 3 credits
This course is the study of the reading process with emphasis placed on understandings and skills needed by secondary school students in their subject fields.

EDUC. 110 Prof. Curtis
Values Development 3 credits
A course designed to acquaint the student with theories relating to value development: what values are, and how they are formed. The affective process, value systems, activities for value development suitable for use by parents, teachers and others involved in human relations will be covered. The emphasis will be on the adolescent. Open to all majors. (GE Area II)

EDUC. 111 Staff
Professional Seminar 1 credit
Discussion of topics related to teaching such as professional organizations, employment, and legal issues. Taken following Education 105.

EDUC. 112 Dr. Conover
Introduction to Geography 3 credits
A course designed to introduce the major concepts and skills of geography. Major land forms, bodies of water, climate, and the relation of land to human endeavor will be covered. Open to education and non-education majors. (GE Area II elective)

EDUC. 113 Staff
Classroom Management and Discipline 2 credits
In-depth study of the rationale, theories, and techniques for creating a situation where learning can take place and for handling specific individual and group behavior problems in productive ways. (GE Area II)

EDUC. 190 Staff
Special Topics in Education 1-3 credits
A series of courses dealing with specific educational issues, theories, ideologies, skills, methods, or other designated topics for individual or group study. Course is offered on student demand. (GE Area dependent on topic)

ENGINEERING

DR. DiSTEFANO, *Advisor*

The University provides a pre-engineering program which introduces the student to the highly technical training necessary for all phases of the engineering profession. This is a two-year course which enables the student to transfer to an engineering school to complete his degree work.

Of special importance is the University of Scranton's association with the Cooperative Engineering Program at the University of Detroit, and its programs in chemical, civil, electrical, environmental, and mechanical engineering. For the student who has completed the pre-engineering curriculum at the University of Scranton, the Detroit three-year cooperative program offers alternate semesters of formal instruction and work experience in industry. A direct transfer program is available with Widener College, which may be either a Co-op program beginning in the summer preceding the Junior Year or a regular two-year program.

Other engineering schools into which University of Scranton students transfer include Lehigh, Bucknell, Penn State and Drexel among others.

In addition to the valuable experience gained from industry, many students have been able to pay the cost of their tuition from the remuneration received for their work. This amounts to a substantial equivalent scholarship grant.

See also the Electronics Engineering Program offered in the Physics Department.

ENGINEERING TRANSFER PROGRAM

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Phys. 11-12	Elements of Physics I-II	4	4
COGNATE	CMPS 20	Computer Science	3	
COGNATE	Math. 14-21	Analysis I-II	4	4
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			18	15
		INTERSESSION OR SUMMER		
GE AREA	Elective	Humanities, Social Science Elective	3	
		SOPHOMORE		
MAJOR	EE 24	Circuit Analysis		4
MAJOR	Engr. 21-22	Statics - Dynamics	3	3
COGNATE	Phys. 21	Elements of Modern Physics	4	
COGNATE	Math. 22-101	Analysis III - Diff. Equations	4	4
COGNATE	Chem. 11-12	General and Analytical Chemistry	4½	4½
GE FREE	Elective	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½

TOTAL: 75 credits

ENGLISH

DR. McINERNEY, *Chairman*

The department provides instruction in literature and communication for all students in the College. Literature courses may be chosen for the humanities area (IV) or as cognate courses for other humanities majors. In the basic English major program of 36 credits, 21 are specified below; the student selects the remaining 15 hours as the "specific difference" which individualizes his major program, depending on the student's vocational and intellectual interest—graduate studies in English, law school, journalism, business, etc.

After freshman year, students may propose an alternate major program for departmental approval. The department also offers a 5-year AB-MA program.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Engl. 11-101	English Inquiry —British Literature	3	3
COGNATE	Electives	Cognate Inquiry	3	3
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective	3	
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Engl. 102-103	British Literature	3	3
COGNATE	Electives	Foreign Language or other Cognate	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Engl. 104-105—Elec.	Required and Elective Courses	6	6
COGNATE	Hist. 140-141	History of England or other Cognates	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
GE FREE	Intd.	Interdisciplinary Elective		3
			15	18
		SENIOR		
MAJOR	English 106-Elec.	Electives	6	6
COGNATE	Electives	Foreign Literature or other Cognates	3	3
GE AREA IV	Humanities	Electives	3	3
GE FREE	Electives	Electives	3	3
			15	15

TOTAL: 127 credits

The department recommends The Nature of Nature (Intd. 3) as the Interdisciplinary Elective.
For COGNATE sequence in freshman year, the department recommends History 3-4, or for those intending upon graduate work in English, a foreign language.

ENGL. 2 Staff
Oral Communication 3 credits
A study and application of the skills which are necessary for the attainment of proficiency in oral communication. Laboratory techniques for individualized instruction will be stressed; tapes and other modern media will be used. Successful completion of English 2 fulfills the oral communication skills requirement of the college.

ENGL. 7 Staff
Written Communication 3 credits
Proceeding from the assumption that the ability to write effective prose is one of the hallmarks of students educated in the liberal arts tradition, this course facilitates the realization of this ideal in accordance with individual potential. More specifically, this course explores the interaction of thesis, appropriate expression, and structure apparent in any well-written paper. Recognized stylistic exemplars are accorded careful analytical consideration. Subject to the instructor's discretion, some provision may be made for "creative" writing assignments. Successful completion of English 7 fulfills the written communication skills requirement of the college.

ENGL. 11 Dr. Casey
English Inquiry I 3 credits
An exploration of the nature of literary criticism and scholarship. The approach is inductive; the emphasis is on understanding the purposes of the study of literature and on mastering some techniques of that study.

The following literature courses (English 21 through 27) are designed as cognate or general education (humanities) courses for students majoring in fields OTHER than English. English majors are not permitted to fulfill major requirements with these courses.

ENGL. 21 Staff
English Literature 450-1800 3 credits
A study of English literature from *Beowulf* to the beginnings of the romantic movement. The emphasis is textual rather than historical.

ENGL. 22
English Literature Staff
1800 to the Present Day 3 credits
A study of English literature from romantic period to the middle of the twentieth century. The emphasis again is textual and critical.

ENGL. 23
American Literature through the Staff
Romantic Period 3 credits
A study of major figures in America's literature from the colonial period through the age of transcendentalism including such figures as Edward Taylor, Jonathan Edwards, Hawthorne, Thoreau, Emerson, Melville, and Whitman.

ENGL. 24
American Literature to the Staff
Present Day 3 credits
The study of major figures in America's literature from the beginnings of realism to today's literature of revolt. Included will be such disparate authors as Twain, Dickinson, Dreiser, Lewis, Hemingway, Fitzgerald, Ginsberg.

ENGL. 25 Staff
Introduction to Fiction 3 credits
An exploration of the nature of prose fiction, its elements and techniques. The emphasis is critical rather than historical. The range of works and the specific selections may vary with the individual instructor.

ENGL. 26 Staff
Introduction to Poetry 3 credits
An exploration of the nature of poetry, its value, aims, and techniques. The emphasis will be critical rather than historical. The range of poems and the specific selections will be the choice of the individual instructor.

ENGL. 27 Staff
Introduction to Drama 3 credits
An exploration of the nature of drama, its types, techniques, and conventions. The emphasis will be critical rather than historical.

ENGL. 101 Dr. Stauffenberg
British Literature: Medieval and
Renaissance Periods 3 credits
A detailed study of representative works and authors from *Beowulf* to the Restoration. Though the emphasis will be on an intensive study of major texts, some consideration will be given to minor writers and their times.

ENGL. 102 Dr. Mitchell
British Literature: The Restoration and Eighteenth Century 3 credits
Study in depth of the major works of such authors as Dryden, Pope, Swift, Boswell, and Johnson, among others. Due attention will be given to critical analysis, literary research, and historical, social, and political background.

ENGL. 103 Prof. O'Rourke
British Literature: Romantic and Victorian Periods 3 credits
A study of major literary works of nineteenth-century England: poetry, novels, and non-fictional prose. The emphasis is threefold: critical analysis; literary history; social, intellectual and political background.

ENGL. 104 Dr. Gougeon
American Literature to 1865 3 credits
An in-depth study of a select group of major American authors from the Colonial Period to the Civil War. Included are Bradford, Franklin, Irving, and Poe. Consideration given to the historical and cultural milieu and development of major American themes and attitudes.

ENGL. 105 Dr. Ryan
Twentieth Century British Literature 3 credits
Study of selected major British and Anglo-Irish poets, playwrights, and novelists of the present century. Such authors as Yeats, Auden, Osborne, Shaw, Pinter, Joyce, Woolf, and Graham Greene will be read.

ENGL. 106 Dr. Gougeon
American Literature, 1865-Present 3 credits
Study of a select group of major American authors from the Civil War to the present. Included are Twain, Crane, Fitzgerald, and Vonnegut. The historical and cultural milieu and the development of major American themes and attitudes.

ENGL. 112 Dr. Mitchell
Black Literature 3 credits
This is an introductory survey course in Afro-American literature featuring an in-depth examination of the works of major Black authors from the colonial American period to the present.

COMM. 113 Prof. Warner
Logical and Rhetorical Analysis 3 credits
A study of the principles of logic and persuasion, an analysis of fallacies, the principles of structure in written and oral composition. Practice in briefs and abstracts with an emphasis on exactness and clearness. (GE Area III or IV)

COMM. 114 Prof. Warner
Argumentation and Debate 3 credits
A study of the techniques of argumentation and persuasion. Major areas of concentration are in research, case construction, and analysis. (GE Area III or IV)

ENGL. 124 Dr. Ryan
Creative Writing 3 credits
Theory and practice of imaginative writing, with a concentration on the short story. Opportunities will also be provided for those students whose primary interest is in another genre: poetry, one-act play, or essay. (GE Area III or IV)

ENGL. 125 Dr. Rakauskas
Written Communication; Strategies for Teaching Writing 3 credits
Those elements of the communication process peculiar to developing writing skills with emphasis placed on writing as a process. Student is involved in laboratory activities: each class member experiences a "mini-teaching responsibility" by functioning as laboratory assistant for the University's writing center, by planning assignments, generating writing situations, and responding as an audience. (GE Area III)

ENGL. 127 Dr. Rakauskas
Teaching Modern Grammars 3 credits
This course is designed to provide an understanding of the English language and its grammar, based upon recent linguistic analysis of the language, and to assist the future teacher in his understanding of transformational/generative grammar and its place in the curriculum. Techniques for teaching these new grammars, and laboratory teaching experience in the freshman writing clinic will be presented. Students seeking certification as secondary school English teachers should also be advised that the usual teacher of Engl. 127, as well as 125, Dr. Wm. Rakauskas, supervises student teachers for the department. (GE Area III)

ENGL. 131-132 Drs. Stauffenberg & Jordan
Masterworks of Western Civilization 6 credits
Study of masterpieces of literature from the Hebrew Old Testament and classic Greek to the modern European illuminating the development of Western civilization.

ENGL. 135 Dr. Stauffenberg
The Bible as Literature 3 credits
A non-theological examination of the major literary achievements of the Old and New Testaments, emphasizing the generic diversity and aesthetic richness of the Bible's individual components.

The particular subject for each of the following courses (English 151-158) will vary from year to year, to allow flexibility, and to recognize changing student needs and interests. Course descriptions will be provided during pre-registration:

English 151-152. Special Studies in Literature: Major Author.
Topics—Shakespeare, Chaucer, Milton, Pope, Dickens, Joyce, Whitman, Dickinson, Twain, James, Faulkner, Gerard Manley Hopkins, Poets: Three New Voices, Donne.

English 153-154. Special Studies in Literature: Genre.
Topics—The Myth of the Hero, Theories of Comedy, Satiric Literature, Tragedy, Short Story, Melodrama—Then And Now.

English 155-156. Special Studies in Literature: Group or Period.
Topics—Theatre of the Absurd, Literature of the American Twenties, The Augustans, the Romantics, 17th Century Divines, Modern Russian and Scandinavian Drama, Modern Poetry, American Social Drama.

English 157-158. Special Studies in Literature: Theme or Topic.
Topics—Women in Literature, the Literature of War and Peace, the Literature of Revolution, Literature and the Grotesque, Detective Fiction, Liturgy as Literature, Literary Criticism, Canadian Literature.

ENGL. 158 Dr. Stauffenberg
Liturgy as Literature 3 credits
Discussion of the various liturgical texts employed by the Eastern-Rite Churches as literary documents.

ENGL. 159 J.J. Quinn, S.J.
Flannery O'Connor 3 credits
A critical study of the short stories and novels of the modern American Christian writer.

ENGL. 160-61 Dr. Zahler
History of the Theatre 6 credits
A study of the various ages of Western theatre; the method is concentration on individual playwrights, the historical circumstances in which they lived and worked, the traditions they inherited. (GE Area IV)

ENGL. 170 J.J. Quinn, S.J.
Travel Seminar: London 3 credits
Guided visits to London galleries, museums, theatres, cinema, broadcast studios, concert halls, Royal Shakespeare Co.; meetings with stage personalities.

ENGL. 190 Dr. Mitchell
Harlem Renaissance 3 credits
A concentrated study of the most fruitful era in American literature of the 1920s, let alone Black literature, with particular references to the social, economic, and political life of the times.

ENGL. 191-197 Staff
Guided Independent Study variable credit
A tutorial program open to Junior and Senior students. Content determined by mentor.

See additional related course listings under Communications major.

FOREIGN LANGUAGES AND FINE ARTS

DR. KAMLA, *Chairman*

The program of the Foreign Language and Fine Arts Department is designed to enable the student to read, write, speak and comprehend one or more foreign languages; to think and express him/herself logically, precisely and critically in one or more foreign languages; to acquire skills in literary criticism by reading representative foreign authors; to gain insight into the evolution of the culture and civilization of foreign peoples as reflected in their literature and arts; to develop an aesthetic appreciation and a critical acumen through the study of the achievements of various peoples in the realm of fine arts and classical music.

The Bachelor of Arts program in Classical Languages gives the student a solid foundation in Latin and Greek to engender an appreciation of the liberal aspects of Classical Studies. Classics majors are encouraged to take their junior year abroad at Loyola University's Rome Center of Liberal Arts with which the University of Scranton is affiliated.

A major in modern foreign language requires the completion of 36 credits in one language beginning with the intermediate level. Modern language majors normally take at least 12 credits in a second language, either modern or classical, as their cognate. A double major may be pursued by taking 36 credits in one language beginning with the intermediate level, and by satisfying the major and cognate requirements of another department. The placement of students at a particular foreign language level is the responsibility of the chairman. Modern language majors are advised to take the Modern Language Proficiency Test in their junior or senior year.

FRENCH

FRENCH 1 & 2
Elementary French 6 credits
Designed to impart a good basic foundation in comprehending, speaking, reading, and writing of the French language. Designed primarily for students with no or insufficient background in the French language. Meets four hours a week or equivalent.

FRENCH 23 & 24
Intermediate French 6 credits
(Prerequisites: French 1 & 2, or equivalent) Designed to give greater scope and depth to the student's knowledge of the grammar and style of the French language, with readings of original works selected from French literature. Meets four hours a week or equivalent.

FRENCH 101 & 102
Advanced French Composition and Conversation 6 credits
(Prerequisites: French 23 & 24, or equivalent) An intensive course in French composition and conversation with emphasis on detailed study of advanced grammatical and stylistic usage of the French language. Meets three hours a week, or equivalent, and one hour weekly independent practice in the language laboratory.

FRENCH 111 & 112
Survey of French Literature 6 credits
(Prerequisites: French 101 & 102, or equivalent) A review of French literature from the chanson de geste to the contemporary period. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory.

FRENCH 113 & 114
Survey of French Culture and Civilization 6 credits
(Prerequisites: French 101 & 102, or equivalent) A review of the historical, philosophical, artistic, literary, and scientific development of the French people from the Roman occupation to the present. Meets three hours a week, or equivalent, besides a laboratory program based on class materials.

FRENCH 131
Medieval and Renaissance French Studies 3 credits
(Prerequisite: French 101 & 102, or equivalent) Selected literary works from the eleventh century to the late Renaissance. Meets three hours a week, or equivalent, besides a laboratory program based on class materials.

FRENCH 141
XVIIth Century French Studies 3 credits
(Prerequisites: French 101 & 102, or equivalent) Literary, philosophical, and social expression from 1610 to 1715. Meets three hours a week, or equivalent, besides a laboratory program based on class materials.

FOREIGN LANGUAGE CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Language	Intermediate or Advanced Language	3	3
COGNATE	Lang. 1-2 or 23-24	Second Modern or Classical Language	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA III	Communications	Elective	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Lang. 101-102	Advanced Composition and Conversation	3	3
COGNATE	Lang. 23-24	Second Modern or Classical Language	3	3
COGNATE	Lang. 184-Elec.	Introduction to Linguistics*—Elective	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Lang.	Advanced Language Elective	6	6
COGNATE	Elective	Elective	3	
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil.-T/RS	Philosophy or Religious Studies Elective		3
GE FREE	Intd.	Interdisciplinary Elective		3
			15	18
		SENIOR		
MAJOR	Lang.	Advanced Language Elective	6	6
COGNATE	Elective	Elective	3	
GE AREA I	Nat. Sci./Quant.	Elective	3	
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil.-T/RS	Philosophy or Religious Studies Elective		3
GE FREE	Electives	Electives	3	3
			15	15

TOTAL: 127 credits

*For modern language majors only.

For modern language majors seeking certification in secondary education, the departmental chairman and Director of Student Teaching should be consulted on a program.

In Area III, English 7 and English 2 are recommended during first year.

In Area IV, Hist. 114, 115, 116, 119 or 161-62 are recommended for modern language majors.

Students who begin language at the Advanced (101) level will take 6 credits less in the major and 6 credits more in the Cognate or Free Area in either Junior or Senior year.

FRENCH 151
XVIIIth Century French Studies 3 credits
(Prerequisites: French 101 & 102, or equivalent) The Enlightenment from 1715 to 1789. Meets three hours a week, or equivalent, besides a laboratory program based on class materials.

FRENCH 161
XIXth Century French Novel 3 credits
(Prerequisites: French 101 & 102, or equivalent) The development of prose narration as reflected in the literary movements of the age. Meets three hours a week, or equivalent, besides a laboratory program based on class materials.

FRENCH 162
XIXth Century French Poetry 3 credits
(Prerequisites: French 101 & 102, or equivalent) The development of poetic forms from the romantic to the symbolist movement. Meets three hours a week, or equivalent, besides a laboratory program based on class materials.

FRENCH 171
XXth Century French Novel 3 credits
(Prerequisites: French 101 & 102, or equivalent) The development of prose narration from the Dreyfus case to the present. Meets three hours a week, or equivalent, besides a laboratory program based on class materials.

FRENCH 173
XXth Century French Drama 3 credits
(Prerequisites: French 101 & 102, or equivalent) The development of dramatic forms from the Theatre Libre to the present. Meets three hours a week, or equivalent, besides a laboratory program based on class materials.

FRENCH 181
Advanced French Stylistics and Phonetics 3 credits
(Prerequisites: French 101 & 102, or equivalent) Designed to strengthen the speaking and writing skills while emphasizing the production of speech sounds and their transcription by the International Phonetic Alphabet. Exercises in enunciation and phraseology, besides a refined usage of grammar and syntax. Meets four hours a week, or equivalent.

FRENCH 191-197
Guided Independent Study Variable credit
(Prerequisites: French 101 & 102, or equivalent) A tutorial program open to junior and senior students only. Content determined by mentor.

GERMAN

GERMAN 1 & 2
Elementary German 6 credits
(Prerequisite: None) A complete course in the fundamentals of the German Language. Emphasis on reading of graded texts, with written and oral and aural exercises. Designed primarily for students with no or insufficient background in the German language. Meets four hours a week, or equivalent.

GERMAN 23 & 24
Intermediate German 6 credits
(Prerequisite: German 1 & 2, or equivalent) Reading from modern authors of moderate difficulty. Oral and written exercises. Systematic review of German grammar. Meets four hours a week, or equivalent.

GERMAN 101 & 102
Advanced German Conversation and Composition 6 credits
(Prerequisite: German 23 & 24, or equivalent) Selected texts in prose and poetry. Advanced practice in conversation and composition. Survey of German grammar. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory.

GERMAN 111 & 112
Survey of German Literature 6 credits
(Prerequisites: German 101 & 102, or equivalent) A survey of German literature from the eleventh century to the contemporary period, with special emphasis on the main intellectual currents as well as the social and political developments. Meets three hours a week or equivalent, and one hour weekly independent practice in the language laboratory.

GERMAN 113 & 114
History of German Civilization 6 credits
(Prerequisite: German 101 & 102, or equivalent) Selected readings of representative essays by major philosophers, scientists, historians and related self-analysis by major writers. Discussions, oral and written reports. Meets three hours a week or equivalent, and a one hour weekly independent practice in the language laboratory.

GERMAN 131
German Lyric Poetry 3 credits
(Prerequisite: German 101 & 102, or equivalent) Readings will include representative poems from the medieval *Minnesang* up to contem-

porary lyric forms. Discussions will center on textual analysis and poetic theory. Meets three times a week, or equivalent, plus a one-hour weekly independent practice in the language laboratory.

GERMAN 141
Literature of the Middle Ages and the Baroque 3 credits
(Prerequisite: German 101 & 102, or equivalent) Reading of the great epics: the *Nibelungenlied, Tristan, Parzival;* plus selected works of the 16th and 17th century. Meets three times a week, or equivalent, plus a one hour weekly independent practice in the language laboratory.

GERMAN 151
The Age of Enlightenment 3 credits
(Prerequisite: German 101 & 102, or equivalent) A study of representative authors of the first half of the 18th century: Lessing, Herder, Klopstock. Meets three times a week, or equivalent, plus a one hour weekly independent practice in the language laboratory.

GERMAN 152
Goethe and his Contemporaries 3 credits
(Prerequisite: German 101 & 102, or equivalent) A study of the literature of the late 18th century: Goethe, Schiller, Hölderlin. Meets three times a week, or equivalent, plus a one hour weekly independent practice in the language laboratory.

GERMAN 161
German Romanticism 3 credits
(Prerequisite: German 101 & 102, or equivalent) Readings in the novel, drama, and poetry of early 19th century authors, such as Kleist, E.T.A. Hoffmann and Novalis. Meets three hours a week or equivalent, plus a one hour weekly independent practice in the language laboratory.

GERMAN 162
Poetic Realism 3 credits
(Prerequisite: German 101 & 102, or equivalent) A study of the works of late 19th century authors, such as Storm, Fontane, and Keller. Meets three times a week or equivalent, plus a one hour weekly independent practice in the language laboratory.

GERMAN 171
German Literature up to 1945 3 credits
(Prerequisite: German 101 & 102, or equivalent) An in-depth study of such authors as Brecht, Mann, Kafka, and Rilke. Meets three hours a week, or equivalent, plus a one hour weekly independent practice in the language laboratory.

GERMAN 172
Postwar German Literature 3 credits
(Prerequisite: German 101 & 102, or equivalent) Concentration on contemporary authors such as Frisch, Dürrenmatt, Grass and Böll, as well as representative authors from East Germany. Meets three hours a week, or equivalent, plus a one hour weekly independent practice in the language laboratory.

GERMAN 175 & 176
Scientific German I-II 6 credits
(Prerequisite: None) Readings in the literature of chemistry, physics, and the biological sciences. The object of the course is to enable students to use German source material in their scientific work.

SPANISH

SPANISH 1 & 2
Elementary Spanish 6 credits
(Prerequisite: None) Fundamentals of grammar, drill in pronunciation, conversation, easy readings and written exercises. Designed primarily for students with no or insufficient background in the Spanish language. Meets four hours a week, or equivalent.

SPANISH 23 & 24
Intermediate Spanish 6 credits
(Prerequisites: Spanish 1 & 2, or equivalent) Grammatical review, written and oral composition. Selected cultural readings of intermediate difficulty. Meets four hours a week, or equivalent.

SPANISH 101 & 102
Advanced Composition and Conversation 6 credits
(Prerequisites: Spanish 23 & 24, or equivalent) A thorough study of Spanish grammar, composition, oral and written, with aim of developing ability to write clear and fluent Spanish. Practice in oral composition. Meets three hours a week or equivalent, and a one hour weekly independent practice in the language laboratory.

SPANISH 111
Spanish Culture and Civilization 3 credits
(Prerequisites: Spanish 101 & 102, or equivalent) An overview of the diverse historical, political, religious and artistic factors that have determined the cultural make-up of the peoples of the Iberian peninsula. Meets three hours per week or equivalent, and one hour weekly independent practice in the language laboratory.

SPANISH 112
Spanish-American Culture and Civilization 3 credits
(Prerequisites: Spanish 101 & 102, or equivalent) An overview of the culture and civilization of Iberoamerica with a dual focus on both the distinguishing features of the four principal cultural areas, and such unifying features as language and religion. Meets three hours per week or equivalent, and one hour weekly independent practice in the language laboratory.

SPANISH 115 & 116
History of Spanish Literature 6 credits
(Prerequisites: Spanish 101 & 102, or equivalent) Study of Spanish literature from Cantar de Mio Cid to XX century, with emphasis on main literary currents in each century. Lectures in Spanish. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory.

SPANISH 117-118
Survey of Spanish-American Literature 6 credits
(Prerequisites: Spanish 101-102 or equivalent) A survey of Spanish-American literature from the 16th century to the present, with representative readings from each of the principal cultural areas. Meets three hours a week or equivalent, and one hour weekly independent practice in the language laboratory.

SPANISH 121
XIXth and XXth Century Spanish Drama 3 credits
(Prerequisites: Spanish 101-102 or equivalent) Peninsular drama from Romanticism to the contemporary period, with emphasis on dramatic forms after Buero Vallejo and new directions of Spanish theatre in the post-Franco era. Meets three hours a week or equivalent, and one hour weekly independent practice in the language laboratory.

SPANISH 122
Spanish American Drama 3 credits
(Prerequisites: Spanish 101-102 or equivalent) Spanish American drama from the late XIXth century to the present, with emphasis on contemporary trends. Meets three hours a week or equivalent, and one hour weekly independent practice in the language laboratory.

SPANISH 131 & 132
The Golden Age 6 credits
(Prerequisites: Spanish 101 & 102, or equivalent) The development of the novel, with the culmination of all forms in Cervantes; and of the drama, reaching its perfection in De Vega and Calderon. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory.

SPANISH 161 & 162
The Modern Spanish Novel 6 credits
(Prerequisites: Spanish 101 & 102, or equivalent) The short story and the novel in Spain in the late 19th and early 20th centuries. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory. Lectures and discussions in Spanish.

SPANISH 163 & 164
The Latin American Novel 6 credits
(Prerequisites: Spanish 101 & 102, or equivalent) An examination of the esthetic, cultural and social aspects of prose fiction in Latin America over the past two hundred years. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory.

SPANISH 165 & 166
The Generation of 1898 6 credits
(Prerequisites: Spanish 101 & 102, or equivalent) Thorough examination of the movement, its political, historical, and social background; Ganivet, Unamuno, Azorin, etc. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory.

SPANISH 167-168
Spanish American Short Story 6 credits
(Prerequisites: Spanish 101-102 or equivalent) The development of the short story as a literary genre in Spanish America from the beginning of the 19th century to the present. Meets three hours a week or equivalent, and one hour weekly independent practice in language laboratory.

SPANISH 191 & 192
Guided Independent Study variable credit
A tutorial program open to junior and senior students only. Content determined by mentor.

ITALIAN

ITALIAN 1 & 2
Elementary Italian 6 credits
A course in Italian for beginners. Principles of Italian grammar, drill in pronunciation; conversation and easy readings.

ITALIAN 23 & 24
Intermediate Italian 6 credits
(Prerequisite: Italian 1 & 2, or equivalent) Selected modern readings of intermediate difficulty. Written and oral composition.

GREEK

GREEK 1 & 2
Elementary Greek 6 credits
An intensive course in the fundamentals of Classical Greek grammar.

GREEK 23 & 24
Intermediate Greek 6 credits
Review of fundamentals. Readings from Xenophon, Euripides and the New Testament.

GREEK 101
Homer 3 credits
Selected readings from the Iliad and the Odyssey. An appreciation of the diction, thought and beauty of Homer.

GREEK 102
Thucydides 3 credits
Evaluation of fifth century Athens and of Thucydides as philosopher and historian. Readings from the History of the Peloponnesian War.

GREEK 105
Plato 3 credits
Reading of the Apology. A philosophical, historical and literary analysis of Plato and Socrates. Supplementary reading in the Crito and Phaedo.

GREEK 106
Euripides 3 credits
Reading and analysis of the Medea with an evaluation of the art and thought of Euripides.

GREEK 107
Sophocles 3 credits
Evaluation of Sophocles as a poet, dramatist and thinker through a study of the Oedipus Tyrannus.

GREEK 108
Demosthenes 3 credits
An analysis of the De Corona as a model of rhetoric. Consideration of the rhetorical norms established by Aristotle.

GREEK 109-110
Readings in Greek Literature 3-6 credits
Selections from Greek writers to suit the student's special interest.

GREEK 191-197
Guided Independent Study variable credit
A tutorial program open to junior and senior students only. Content determined by mentor.

LATIN

LATIN 1 & 2
Elementary Latin 6 credits
An intensive course in the fundamentals of Latin. Reading and composition.

LATIN 23 & 24
Intermediate Latin 6 credits
Review of fundamentals. Reading of selections from Caesar, Cicero and Virgil.

LATIN 101
Horace and Juvenal 3 credits
A study of Roman satire revealing the life, manners and thought of the times.

LATIN 103
Cicero and Lucretius 3 credits
Selections from the Tusculan Disputations and the De Rerum Natura illustrate contrasting developments in Roman thinking. The course includes a brief survey of ancient philosophy.

LATIN 104
Christian Latin Literature 3 credits
Selections from Christian Latin writers with concentration on the Confessions of St. Augustine.

LATIN 107
Livy and Virgil 3 credits
Selections from Livy I and XXI, and from Books VII-XII of Virgil's Aeneid.

LATIN 108
Horace and Catullus 3 credits
Lyric poetry illustrated by the Odes of Horace and selected poems of Catullus.

LATIN 109 (110)
Readings in Latin Literature 3-6 credits
Selections from Latin writers to suit the student's special interest.

LATIN 111 & 112
Medieval Latin 6 credits
Introduction to medieval Latin. Readings in medieval prose and poetry from the ninth to the fifteenth centuries.

LATIN 191-194
Guided Independent Study variable credit
A tutorial program open to junior and senior students only. Content determined by mentor.

SLAVIC

SLAV 107 Dr. Petrovic
Masterworks Russian & Slav Literature 3 credits
A survey of major literary achievements of Slavic peoples. Dostoyevsky, Tolstoy, Cosic, Sienkiewicz and Solzhenitsyn will be read. No knowledge of Slavic languages is required. All readings and lectures are in English. (Area IV)

FINE ARTS

ART 101 & 102 Prof. Jones
Appreciation of the Visual Arts 6 credits
The interpretation, appreciation and aesthetic norms of art, architecture and sculpture. Aegean civilization. Greece and Rome. Early Christian and Byzantine art. Romanesque and Gothic classes will be discussed during the first semester. The spring term includes the Renaissance painting, sculpture and architecture; Baroque period painting in the Low Countries and England. French art from Classicism to post-impressionism. Modern Trends. (GE IV)

ART 103 & 104 Staff
Music Appreciation 6 credits
Introduction to elements and forms. Analysis and interpretation of respected masterpieces to encourage perceptive listening habits. The first semester will preview music development to Bach, while the second semester will treat compositions from Bach to the present including America. No previous formal training is required. (GE AREA IV)

ART 109 Mrs. Carroll
Survey of Keyboard Music 3 credits
The music written for the piano, organ, harpsichord and clavichord from the Renaissance to 20th Century. Designed for non-musicians, the course focuses on the development of keyboard instruments and the forms and composers that dominate the literature. Recordings, live performances and a field trip. (AREA IV)

ART 110 Fr. Krieger
History of Modern Art 3 credits
An examination of nineteenth and twentieth century art, including impressionism, post-impressionism, cubism, and current trends. (GE Area IV)

ART 111 & 112 Prof. Jones
History of American Art 6 credits
A survey of architecture, sculpture, and painting in America from the 17th century to the present day. (GE AREA IV)

ART 113 Fr. Krieger
History of Architecture 3 credits
A survey from ancient Egypt to Modern times which moves beyond principles of construction and the identification of styles to consider the enduring aesthetic and social statements that buildings make. (GE AREA IV)

ART 125 Dr. Petrovic
Legacy of Greek and Rome 3 credits
Survey of the artistic and cultural treasures of classical Greeks and Romans with a focus on the enduring legacy in our own civilization. (AREA IV)

ART 151 Fr. Krieger
American Architecture I 3 credits
U.S. architecture from the settlement of the colonies to 1900. Considers both European and native contributions to its development. Since Scranton was founded during this period, attention will be focused on examples the city provides.

ART 152 Fr. Krieger
American Architecture II 3 credits
Reviews the 19th century stylistic revivals in American architecture and moves on to cover fully the modern contributions of the 20th century.

ART 171 Dr. Stauffenberg
Byzantine-Slav Architecture 3 credits
The religious manifestations of "Byzantine" architecture from its inception through its unique Slavic interpretation during the Middle Ages. Field trips to regional churches.

HISTORY

DR. DeMICHELE, *Chairman*

The department aims: 1. to train the student in solid historical methodology; 2. to present history as the study of interdependent human activities and concrete events which have social significance; 3. to engender an intelligent and critically sympathetic understanding of various civilizations and cultures.

The department offers a special program that enables qualified students to obtain both their Bachelor and Master's degree within four calendar years. The program utilizes Intersession or summer sessions and the use of four graduate history courses as part of the undergraduate program. The chairman of the department should be contacted for details of the program.

See the Pre-Law program on page 47 for details of the department's success in this area.

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	History 3-4	Europe: 1500 to Present	3	3
MAJOR	History 1-2	United States History	3	3
COGNATE	Elective	Inquiry Sequence or Language	3	3
GE AREA III	Communications	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
GE FREE	Elective	Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	History	Electives*	3	3
COGNATE	Electives	Electives	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	History	Electives	3	3
COGNATE	Electives	Electives	3	3
GE AREA I	Nat. Sci./Quant.	Elective	3	
GE AREA II	Social/Behavior	Electives	6	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
GE FREE	Intd.	Interdisciplinary Elective		3
			18	15
		SENIOR		
MAJOR	History	Electives	6	6
COGNATE	Electives	Electives	3	3
GE AREA II	Social/Behavior	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE FREE	Elective	Elective		3
			15	15

TOTAL: 127 credits

*Department recommends Hist. 100, Research Methods, for Sophomore History majors.

HIST. 1 & 2 Staff
History of the United States 6 credits
The United States from the time of its European beginnings to the present with special emphasis on the history of Pennsylvania; colonial origins to Reconstruction; Gilded Age to the modern era.

HIST. 3 & 4 Staff
Europe, 1500 to the Present 6 credits
European history with concentration upon the political aspects of European development. The rise of national monarchies; political, social, economic, and intellectual developments; industrialism, the new nationalism and liberalism.

HIST. 100 Dr. Homer
Research Methods: The Historian at Work 3 credits
Introduction to the techniques of historical research including the use of library and bibliographical materials, the use and interpretation of evidence, and the preparation of written papers. Course is designed to assist any student, regardless of major, who wishes to improve research and term paper skills.

HIST. 101 & 102 Fr. Scott
Ancient History 6 credits
The rise of civilization in Mesopotamia, Egypt, the Indus Valley and the Mediterranean world; growth of civilization in China and India; the rise of Greece and Hellenism; Rome from Republic to Empire; the barbarians and the end of ancient culture; the origins of Christianity; pre-Colombian civilization in the New World.

H/PS 103 Dr. Feller
Saving America's Past 3 credits
Introduction to problems of the changing urban-suburban environment. Using Lackawanna County as a model study region, the issue of urban planning, architectural recycling, historic preservation and citizen awareness will be explored. Walking tours of Scranton and surrounding communities.

HIST. 104 Dr. Feller
American Decorative Arts 3 credits
Introduction to the sources of American decorative and folk arts and interior architecture from the Boston Tea Party to the Philadelphia Centennial Exhibition. The arts themselves and evolution and development of American tastes will be examined as primary source material for the cultural historian, reflective of contemporaneous socio-political trends. Visits to public and private collections in the region.

HIST. 105 Dr. Homer
History as Biography 3 credits
An exploration of the nature of biography and its relationship to the study of the past. Biographies of several major figures from the modern era will be read and studied to exemplify different biographical techniques and their utility as means of historical inquiry.

HIST. 110 & 111 Fr. Scott
Medieval History 6 credits
The civilization of medieval Christendom from the fall of the Roman Empire to the beginning of the fourteenth century; its religious, social, economic, cultural and political aspects; the relationship between Church and society, belief and life style, ideal and reality; the interaction between Western Christendom, Byzantium and Islam.

HIST. 112 & 113 Fr. Scott
Renaissance and Reformation 6 credits
Europe in transition from medieval to modern (from the beginning of the fourteenth century to the middle of the seventeenth century); the decline of medieval civilization; the Renaissance, the shattering of Christian unity in the Protestant Reformation; the Catholic response, the age of exploration; the struggle for empire.

HIST. 114 Prof. Williams
French Revolution to 1815 3 credits
Historical antecedents; the philosophies; the republicanism and the fall of the monarchy; Reign of Terror; the Directory; Napoleon; internal achievements; significance of the Spanish and Russian Campaigns; and War of Liberation.

HIST. 115 Prof. Williams
Europe, 1815-1875 3 credits
The congress of Vienna and the European restoration; Industrialism, Liberalism, Socialism, and Nationalism; the revolutions of the 1840's; the unification of Italy and the German Empire; Russia and the Lesser States of Europe; the Third French Republic.

HIST. 116 Prof. Williams
Europe, 1875-1918 3 credits
The domestic problems confronting France, Italy, Germany, Central and Eastern Europe, and Russia. Competition for colonies and markets; the growth of alliances; World War I and the Treaty of Versailles. The Russian Revolution and Communism.

HIST. 117 & 118 Dr. Earl
Twentieth Century Europe 6 credits
World War I; Treaty of Versailles; Russia becomes the U.S.S.R.; the European struggle for security; Italian Fascism; Rise of Nazi Germany; Asia between the two wars; World War II; loss of colonial empires in Africa and Asia; development of the Cold War; Marshall Plan and NATO.

HIST. 119 Staff
Special Topics in European History 3-6 credits
The particular topic or topics will vary from year to year depending on the instructor and changing student needs. Exact course description will be provided at pre-registration. Possible topics include Nazism, World War I, "Ism" in Modern Europe, etc.

HIST. 120 & 121 Dr. Hueston
American Diplomatic History 6 credits
A study of American diplomatic history and principles. The Revolution. Early American policies on isolation and expansion. The War of 1812. The Monroe Doctrine. Manifest Destiny. The Civil War. American imperialism and the Spanish-American War. Latin American diplomacy in the twentieth century. World War I. Attempts to preclude further war. World War II. Cold War. Contemporary problems.

H/PS 122 & 123 Prof. Scully 6 credits
American Constitutional and Legal History
(Recommended for Background: History 1 & 2) The juridicial concepts of the colonial and revolutionary periods; backgrounds of the Federal Convention; the nature of the Constitution, its interpretation by Marshall and Taney. The constitutional problems occasioned by the Civil War; the new amendments; the role of the States in a Federalist system. Key cases will be analyzed in detail and set in their proper historical perspective.

H/PS 124 & 125
American Political and Prof. Scully
Social Thought 6 credits
(Recommended for Background: History 1 & 2) An inquiry into the major philosophies which helped shape our institutions. Puritan concepts; views of the independents; pre-Revolutionary society and thought and the notion of independence; the Constitution as it represents a compromise between the conservative and liberal traditions; Jeffersonian and Jacksonian democracy; social, economic, and political ramifications or the slavery question. Triumph of the nationalist view.

HIST. 128 Staff
Special Topics in American History 3-6 credits
An analysis of selected topics in American history from the colonial era to the present. The particular topic or topics will vary from year to year depending on the instructor and changing student needs.

HIST. 130 & 131 Dr. Feller
Twentieth Century United States 6 credits
(Prerequisite: History 2) An intensive study of American Development from 1900 to the present. Stress will be placed on the Roosevelt Era and its Progressivism. Wilson's New Freedom; diplomacy of the First World War; the return to "normalcy"; the Great Depression and the New Deal; Roosevelt and world politics; origins and consequences of World War II. The Truman Era.

H/SO 134 Dr. Feller
Introduction to Archaeology 3 credits
An introduction to the study of archaeology from the anthropological and historical perspectives. The problems of survey and site recognition, excavation planning, record keeping, treatment of artifacts, and interpretation will be explored. Problems of above-ground archaeology examined. Site visitations included.

HIST. 135 Dr. Homer
Europe in the Age of Absolutism 3 credits
(Recommended for Background: History 3) A study of the major political, social, economic and intellectual movements in Europe from the rise of royal absolutism until the outbreak of the French Revolution.

HIST. 136-137 Dr. Hueston
American Ideas and Culture 6 credits
(Recommended for Background: History 1 & 2) History of American art, architecture, literature, and thought. Colonial Developments. The American Enlightenment. The emergence of a national culture. Romanticism. Post-Civil War Realism in American art and literature. The intellectual response to the industrial order. The American mind in the 1920's. The intellectual and cultural response to the depression. Post-World War II developments.

HIST. 140 Dr. DeMichele
England, 1485 to 1714 3 credits
The end of the Wars of the Roses; Tudor Absolutism, Henry VIII and Reformation; Elizabeth I; Renaissance and Elizabethan Music and Literature; The Stuarts; Colonialism; Commonwealth; Restoration; the Revolution of 1688; Reign of Anne.

HIST. 141 Dr. DeMichele
England, 1714 to Present 3 credits
Parliamentary rule: Cabinet government; Political parties; Industrial Revolution, 19th Century reforms; building of a British Empire; World War I; problems of readjustment; World War II; Britain and the world today.

H/PS. 142
English Constitutional and Dr. DeMichele
Legal History to 1485 3 credits
Anglo-Saxon basis; fusion of Anglo-Saxon and Norman political institutions; Angevin innovations; Magna Carta; concept of representation; beginnings of the Common Law; jury system; emergence of Parliament.

H/PS. 143 Dr. DeMichele
English Constitutional and
Legal History, 1485 to Present 3 credits
Tudor absolutism, struggle between royal prerogative and Parliament; rise of House of Commons; Parliamentary supremacy after 1688; development of Cabinet government; democratic reforms; Parliamentary Bill of 1911; extension of administrative law.

H/PS 148 Dr. Homer
War and Modern Society 3 credits
(See description under Political Science.)

HIST. 150 Dr. Earl
Imperial Russia 3 credits
From the crystallization of political forms in the 9th century through the Kievan State, Mongolian Invasion, Rise of Muscovy to the Eurasian Empire from the 17th to the end of the 19th century.

HIST. 151 Dr. Earl
Russian Revolution and Aftermath 3 credits
A study of the development of radical thought in 19th and 20th century Russia. Analysis of various factors and forces at work in revolutionary Russia. Lenin, War Communism, NEP, Stalin.

H/PS 152 Dr. Earl
Soviet Foreign Policy 3 credits
(See description under Political Science.)

HIST. 155-156 Fr. Scott
Byzantine Civilization 6 credits
The Byzantine Empire from its origins in the Fourth century to its collapse in the 15th; the political and economic growth of the Empire with emphasis on its art and religion.

HIST. 161 & 162 Prof. Williams
Latin American History 6 credits
Pre-Colombian America; the Spanish and Portuguese colonial area, developments to the early nineteenth century. The Latin American Republics, Castroism, The Alliance for Progress, with special stress on inter-American problems.

HIST. 170 Dr. Champagne
Colonial America, 1607-1763 3 credits
The European background of the Age of Discovery; the founding of the British-American colonies; their political, economic and cultural development; British colonial policy and administration; the development of an American civilization.

HIST. 171 Dr. Champagne
American Revolution, 1763-1789 3 credits
Background to the War for Independence; British imperial policy; the development of economic and ideological conflicts; the military contest; British ministerial policy and the parliamentary opposition; the Confederation; the formation of the Constitution.

HIST. 173 Dr. Champagne
The Early National Period of
American History, 1789-1837 3 credits
Beginning of the New Government; Politics and diplomacy in the Federalist Era; Jeffersonian Democracy; the War of 1812; Nationalism and Sectionalism; Marshall and the rise of the Supreme Court; the Jacksonian Era.

HIST. 174 Dr. Champagne
The Middle Period of American
History, 1837-1877 3 credits
Slavery; the Abolitionist Crusade; American Expansion in the 1840's; the Mexican War; Politics and diplomacy in the 1850's; Economic, social, and intellectual developments; the coming of the Civil War; the Civil War; Reconstruction.

H/PS 176 Dr. DeMichele
World Politics 3 credits
(See description under Political Science.)

HIST. 177
History of United States Dr. Hueston
Immigration 3 credits
A study of immigration to the United States with emphasis on the period from the Revolution to the restrictive legislation of the twentieth century. Motives and characteristics of immigration. Experiences of newcomers.

HIST. 178 Dr. Hueston
A History of American Assimilation 3 credits
The history of assimilation (or adjustment) of immigrants to American life. Nativism from pre-Civil War days to the 1920's. The "Old Immigration" and the "New Immigration" considered in the social, political, economic, and religious contexts of their eras. Special problems of the second generation from the 1850's to the 1960's.

H/PS 179 Prof. Williams
The Third World 3 credits
A study of the developing nations of the Third World and their relationships with the developed industrial nations in the contemporary world.

HIST. 180 Dr. DeMichele
Great Discoveries 3 credits
Historical analysis and assessment of the great scientific discoveries and technological developments of mankind from the Age of the Renaissance to the Space Age.

HIST. 182 Prof. Williams
World War II, Cold War & Detente 3 credits
The diplomacy of World War II; the development of the Cold War between the U.S. and the U.S.S.R. and the adoption of the policy of Detente.

HIST. 185 Dr. Earl
Total War 3 credits
Examination of the tactics, strategy, and global significance of World War II. The logistics and scope of the conflict. Importance of propaganda, patriotism and the people. Film-seminar approach. Film fee: $10.00.

H/PS 188 Drs. Earl & DeMichele
Ethnic & Racial Minorities in Northeastern Pennsylvania 3 credits
Film-seminar approach to study of various ethnic groupings in Northeastern Pennsylvania. Seeks to achieve better understanding of the immigrant's problems and his accomplishments through use of documentary and feature films.

HUMAN RESOURCES

DR. SZUHAY, *Chairman*

The Health and Human Services curriculum of the Human Resources Department is designed to develop in students the values, knowledge and skills necessary to work with people in a variety of helping relationships. The sequence of courses includes significant integration with the fields of psychology and sociology. As such, the curriculum is interdisciplinary and allows the student maximum freedom in exploring related academic fields. The program is geared to students who have high social service interests as well as general scientific interest and aptitudes in the social and behavioral sciences. The curriculum is career oriented; this aids the graduate in securing entry-level positions with public and private agencies in programs concerned with preventive and remedial health, welfare and rehabilitation services. The curriculum also provides a solid foundation for future graduate level education in the helping professions, particularly in rehabilitation counseling, school counseling, social work, and psychology. The Department also administers the Master's Degree programs in Rehabilitation Counseling and Human Resources Administration.

HEALTH AND HUMAN SERVICES

	Dept. and No.	Descriptive Course Title	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	H/HS 10	Freshman Seminar	1	
MAJOR	H/HS 11	Foundations of Human Services	3	
MAJOR	H/HS 12	Phil. and Organ. of Human Services		3
COGNATE	Elective	Elective		3
COGNATE	Psych. 23	Fundamentals of Psychology	3	
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20-T/RS 21	Intro. to Phil.—Intro. to Theology	3	3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			17	16
		SOPHOMORE		
MAJOR	H/HS 13	Prof. Contributions in Human Services	3	
MAJOR	H/HS 115-116	Health & Medical Information I-II	3	3
COGNATE	Soc. 21-Elective	Principles of Sociology—Elective	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA III	Communications	Elective		3
GE AREA IV	Humanities	Elective		3
GE AREA V	T/RS-Phil. 110	Theology Elect.—Ethics	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	19
		JUNIOR		
MAJOR	H/HS 101-102	Case Management-Counseling Theories	3	3
MAJOR	Psych. 144 or 155	Childhood & Early Adoles. or Late Adoles., Adulthood & Aging		3
COGNATE	Electives	Electives	3	3
GE AREA I	Nat. Sci./Quant.	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Elective		3
GE FREE	Intd.	Interdisciplinary Elective	3	
			15	15
		SENIOR		
MAJOR	H/HS 103	Group Dynamics	3	
MAJOR	H/HS 199	Internship		3
COGNATE	Electives	Electives	6	6
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil.-T/RS	Elective	3	
GE FREE	Elective	Electives	3	3
			15	15

TOTAL: 128 credits

There are 30 unspecified credits in the Cognate and 6 credits in the Free Area; students should consult their departmental advisor and/or the Counseling Center for meaningful utilization of these 30 credits. A double major with psychology is available.

To be eligible for the 12 month Master's Degree Program in Rehabilitation Counseling, the student must opt for Psych. 24 (or Soc. 122) as Area I electives.

H/HS 10 Staff
Freshman Seminar 1 credit
A group reaction orientation workshop for freshman majors only, designed to improve advising of students in human services and to enhance faculty-student relationships.

H/HS 11 Staff
Foundations of Human Services 3 credits
Designed to increase the student's awareness of his needs, his impact on other persons, and the demands of his environment. The relationship between the professional helper and his clients as the foundation of all human service efforts is emphasized. Group methods will be employed.

H/HS 12 Staff
Philosophy and Organization of Human Services 3 credits
Designed to help students to be more responsive to individual, group, community, and societal needs and to understand the organization and structure of human services. Concepts of organizing, integrating, and implementing a network of different human services are discussed as are services in relation to broader social, economic, and cultural issues and values.

H/HS 13 Staff
Professional Contributions in Human Services 3 credits
Exploration of the numerous professional workers in the field of human services with emphasis on their professional specialties and roles in helping people. The student is expected to participate in individual and group counseling activities emphasizing self understanding and analysis and career planning.

H/HS 101 Staff
Case Management and Interviewing 3 credits
The role of the helper as a case manager or coordinator of services is examined with particular emphasis being placed on development of treatment plans. Initial interviewing skills and techniques are discussed. Case studies and role playing activities are utilized.

H/HS 102 Staff
Counseling Theories and Techniques 3 credits
(Prerequisite: H/HS 101) The role of the helper as an individual counselor or caseworker is examined. Theories and techniques as well as problems in individual counseling are explored.

H/HS 103 Staff
Group Dynamics 3 credits
(Prerequisite: H/HS 101 and 102) The role of the helper as a group intervention specialist is examined. Theories and techniques of group counseling, group process, and group dynamics are explored and practiced in controlled settings. Role playing and structured group experiences are utilized.

H/HS 111 Staff
Introduction to Recreational Therapy 3 credits
Designed to develop an understanding of purpose, organization, administration and delivery of recreational therapy services for handicapped persons.

H/HS 115-116 Staff
Health and Medical Information I & II 6 credits
General data on societal health status is presented along with descriptions of the health professions involved in health services delivery. Selected physical conditions and/or disabling conditions are illustrated with particular reference to body systems involved, treatment possibilities, residual functional limitations, and psycho-dynamics of each condition. (H/HA 115 is prerequisite for H/HS 116.)

H/HS 121 Mr. Spinelli
Organization & Administration of Hospitals 3 credits
The role and responsibilities of hospitals, relationships with other components of the health system and an analysis of the process of hospital administration.

H/HS 191 Staff
Independent Study in Human Services 3 credits
Independent study by the student into some aspect, area, or problem in the field of human services. Approval of mentor is necessary.

H/HS 199 Staff
Internship in Human Services 3-6 credits
Supervised practical experience in a community agency providing human services. In selected cases a student may receive credit for part-time paid work experience.

MATHEMATICS

DR. BEIDLER, *Chairman*

Besides offering a classical undergraduate degree in mathematics, mathematics majors can take major and cognate courses in some of the fastest growing areas related to mathematics. These include courses in statistics, actuarial mathematics, and computer science. The usual cognates for mathematics majors are computer science and the natural sciences. With the permission of the department chairman, other cognates may be chosen.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Math. 14-21	Analysis I-II	4	4
COGNATE	CMPS 20-25	Introduction to Computer Science	3	3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Elective	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			17	17
		SOPHOMORE		
MAJOR	Math. 22-101	Analysis III—Differential Equations	4	4
COGNATE	Phys. 11-12	Elements of Physics I-II	4	4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective		3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			18	18
		JUNIOR		
MAJOR	Math. 108-111	Modern and Linear Algebra	3	3
MAJOR	Math.	Electives	3	3
COGNATE	Electives	Electives	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
GE FREE	Elective—Intd.	Elective—Interdisciplinary Elective	3	3
			15	18
		SENIOR		
MAJOR	Math.	Electives	6	3
COGNATE	Electives	Electives	3	6
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
			15	15

TOTAL: 133 credits

For GE Area III elective, the department recommends Engl. 2 (Oral Commun.) or Engl. 7 (Writing Center), except for those students who are notified that they are already qualified.

MATH. 1 & 2 Profs. Bartley & Johns
Math Discovery 6 credits

Study of fundamental ideas of the science of mathematics. Applications of mathematics in social and management sciences used to furnish foundation for an appreciation of the influence of mathematics in our society.

MATH 3 Staff
Quantitative Methods I 3 credits

Finite Mathematics covering functions and graphs; matrix methods; linear programming and probability.

MATH. 4 Staff
Quantitative Methods II 3 credits
Differential and integral calculus. Calculus with applications to solution of management problems.

MATH. 13 Staff
Pre-Calculus Mathematics 4 credits
An intensified course covering the topics of algebra and trigonometry.

MATH. 14 Staff
Analysis I 4 credits
The beginning of a twelve credit sequence covering the topics of analysis.

MATH. 21 & 22 Fr. Powers, Dr. Sinzdak
Analysis II & III 8 credits
(Prerequisite: Mathematics 14, or equivalent) An integrated course covering the topics of calculus using modern methods.

MATH. 42 Prof. Bartley
History of Math 3 credits
Important mathematical discoveries in their historical context; the works of some prominent mathematicians and the practical significance of their accomplishments.

MATH. 44 Prof. Johns
Special Topics of Statistics 3 credits
Study of the computational aspects of statistics; hypothesis testing, goodness of fit; non-parametric tests; linear and quadratic regression, correlation and analysis of variance.

MATH. 46 Prof. Eichelsdorfer
Theory of Games 3 credits
Study of the basics of game theory concentrating on its most elementary aspects. Attention paid to two-person zero-sum (fair) games.

MATH. 101 Dr. Sinzdak
Differential Equations 4 credits
(Prerequisite: Math 21) Treatment of ordinary differential equations with applications.

MATH. 102 Prof. Johns
Probability Theory 3 credits
Basic concepts of probability theory, random variables and their distribution functions; limit theorems and Markov chains.

MATH. 103 Dr. Sinzdak
Advanced Differential Equations 3 credits
(Prerequisite: Math. 101) The treatment of special differential equations and partial differential equations and their applications.

MATH. 104 Prof. Johns
Statistics 3 credits
(Prerequisite: Math. 4 or Math. 14) Measure of central tendency measure of dispersion, continuous random variables, expected value, moments, confidence intervals, hypothesis testing, regression and correlation.

MATH. 105 Prof. Johns
Geometry 3 credits
Euclidean; non-Euclidean and projective geometry. Transformations and Invariants.

MATH. 106 & 107 Fr. Levko
Advanced Analysis 6 credits
(Prerequisite: Math 22 or permission of instructor) Topics include: Real number system; functions; limits; continuity; differentiation; integration theory; function of several variables; partial differentiation; sequences and series; vector analysis; line and surface integrals; differential geometry.

MATH. 108 Dr. Sinzdak
Modern Algebra 3 credits
(Prerequisite: Math 22 or permission of instructor) Fundamental ideas and properties of groups, rings, fields, polynomials over a field.

MATH. 111 Dr. Sinzdak
Linear Algebra 3 credits
(Prerequisite: Math 22) Vector spaces, matrices, determinants, linear transformations, eigenvalues and eigenvectors, inner products and orthogonality.

MATH. 113 & 114 Staff
Mathematics Seminar variable credit
Designed to allow the student of demonstrated ability to cover advanced topics.

MATH. 115 Staff
Thesis variable credit
(Prerequisite: 24 credits in mathematics) A student's results of the investigation of a specific mathematical topic.

MATH. 120 Fr. Levko
Topology 3 credits
(Prerequisite: Math 22) An introduction to point-set topology. Connectedness, compactness, separation axioms, and metric spaces.

MATH. 121 Fr. Levko
Complex Variables 3 credits
(Prerequisite: Math. 22) The theory of complex variables: The calculus of functions of complex variables; Transformations; conformal mappings; residues and poles.

MATH. 130 Prof. Eichelsdorfer
Actuarial Mathematics 3 credits
(Prerequisite: Math 4 or 14) Theory of Interest, Measure, Accumulation, and Discount, Present and Future Value, Annuities, Perpetuities, Amortizations, Sinking Funds, Yield Rates.

MILITARY SCIENCE

LT. COL. BLAZES, *Chairman*

The primary objective of the ROTC program is to develop leadership capabilities and to train future officers for both the active and reserve components of the United States Army.

Men and women who are between the ages of 17 and 24, U.S. citizens, and physically qualified, may enter the Basic Course. Entrance into M.S. 11, 12 and M.S. 21-22 is voluntary and applicable to the Free Area of the General Education requirement.

Enrollment in the Advanced Course (M.S. 101) is highly selective. Students must pass a medical examination, a Cadet Evaluation Battery, a scholastic aptitude test (SAT or ACT), maintain a "C" average in their first two years of undergraduate work, and must be recommended by a board of faculty and Military Science officers. Advanced cadets attend a six-week ROTC summer camp at the end of their Junior year. Upon completion of the Advanced Course and upon graduation from the University, the cadet is offered a Regular Army or Reserve Commission. Commissions are offered in 17 branches of the Army based on the student's choice, educational background, and the needs of the service.

Advanced Course students receive $100 per month while in school and approximately $317 per month plus travel expenses while at Summer Camp. The Army Scholarship Program offers financial assistance to outstanding young men in the two- or four-year ROTC program. Each Scholarship provides for free tuition, textbooks and laboratory fees in addition to paying a subsistence allowance of $100 per month for 10 months each year the Scholarship is in effect. Cadets selected by the President of the University and the Professor of Military Science may apply for the one-, two- or three-year scholarship program.

Sophomores, who did not elect the Basic Course, may apply to the Professor of Military Science, not later than March 31, for admission to the two-year ROTC Program. Students with prior enlisted service (veterans) are eligible to enroll in the ROTC program.

Freshmen and sophomores may satisfy their Physical Education credit hour requirement with satisfactory participation in the Royal Rifles drill team, Rifle team or the Commandos.

M.S. 11 & 12
Military Science I 2 credits
The Evolution of the United States Defense Establishment: The growth of the Establishment from pre-Revolutionary days to the present, noting such aspects of American thought as militarism, pacifism, and the fear of standing armies.

M.S. 21-22
Military Science II 4 credits
(Prerequisite: M.S. 11 & 12 or the equivalent) The Art of War: Principles of tactics and great commanders. Survey of the major developments in warfare and trace the influence of science and inventions on military tactics.

M.S. 101
Military Science III: Military Leadership and Management 3 credits
(Prerequisite: M.S. 21-22, or equivalent) Analysis of the role of the leader in setting organizational goals and standards; motivating group and individual performance, problems and complications of the exercise of authority, and senior-subordinate relationships. The managerial functions and techniques involved in decision making, psychology of leadership, delegation of authority and responsibility, span of control, and planning and coordinating. (GE AREA II)

M.S. 102
Military Science III: Elective Non-credit
Military Science non-credit elective, or elective from other departments approved by the staff.

M.S. 121
Military Science IV 3 credits
The Army Officer in Contemporary American Society. This course will treat the role of the Army Officer in America today. The course will examine such issues as the responsibilities and duties of the officer to the Army and to society, military justice vis-a-vis civil justice, and the traditional laws of warfare. (AREA II)

M.S. 122
Military Science IV Non-credit
Military Science non-credit elective, or elective from other departments as approved by the staff.

NURSING

DR. ROSELLEN GARRETT, *Chairperson*

The purpose of the Baccalaureate nursing program is the preparation of qualified persons for the practice of professional nursing in hospitals and community health settings. The program also provides the academic foundation for advanced study in nursing.

High school graduates are admitted as freshmen into the program which leads to a Bachelor of Science degree with a major in nursing. The curriculum can be completed in eight regular semesters of full-time study or four academic years. Transfer students will be considered on a space available basis.

The nursing curriculum is approved by the Pennsylvania State Board of Nurse Examiners. The curriculum is based on a planned progression of courses so arranged as to build upon and develop knowledge and skills at levels of increasing competency. Therefore, all required courses must be taken in sequence.

For progression through the nursing program a minimum grade of C must be attained in the prerequisite natural science courses (Chemistry 13-14, Biology 13-14, Biology 125, Mathematics 44) and in each nursing course.

Prior to the junior and senior year, students enrolled in the nursing program must present a certificate as evidence of having completed the Cardiopulmonary Resuscitation Basic Life Support course or Modular course offered by the American Red Cross or the American Heart Association.

In addition to the general University tuition and fees listed in the Student Expenses section, students majoring in nursing assume the responsibility for the following: uniforms and other required clinical accessories, yearly physical examinations, biennial eye and dental examinations, immunizations, NLN achievement tests, liability insurance and any travel expenses incurred. Students must also provide their own transportation to and from agencies utilized for clinical laboratories.

Upon graduation the students will be eligible for admission to examination for the registered nurse licensure.

The Department of Nursing holds membership in the Council of Baccalaureate and Higher Degree programs of the National League for Nursing.

It should be noted that there are four general hospitals with over one thousand medical/surgical, obstetric, or pediatric beds within walking distance of the University. There are a number of other health agencies in the vicinity of the University which further enrich learning possibilities in the nursing program.

NURS. 10 Dr. Garrett
Family Health 3 credits
(For non-nursing majors.) Concepts and principles related to the promotion and maintenance of optimal family health. Considers factors pertinent to health needs and health practices throughout the life cycle. (GE AREA I)

NURS. 12 Dr. Garrett
Foundations of Professional Nursing 3 credits
(Prerequisites: Sophomore status in nursing program) Introduction of historical, philosophical and social foundations of professional nursing and professional nursing practice. Explores health in the broader perspective of the human person in interaction with the environment. Focus on the identification of the role and functions of the professional nurse practitioner as it relates to health care delivery system. 3 hours lecture.

Dr. Rosellen Garrett
Chairperson

NURSING CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
COGNATE	Chem. 13-14	Introductory Chemistry	4	4
COGNATE	Biol. 13-14	Structure & Function of the Human Body	4	4
GE AREA II	Psych. 23	Fundamentals of Psychology*		3
GE AREA IV	Humanities	Electives	6	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			18	18
		SOPHOMORE		
MAJOR	Nurs. 12	Foundations of Professional Nursing		3
MAJOR	Nurs. 14	Nursing I		6
COGNATE	Biol. 125	Intro. Medical Microbiology	3	
COGNATE	Math 44	Computational Statistics		3
GE AREA II	Soc. 127	Medical Sociology*	3	
GE AREA II	Psych. 26	Theories of Personality*	3	
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Elective	3	
GE AREA V	Phil. 110-132	Ethics—Medical Ethics*	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19	19
		JUNIOR		
MAJOR	Nurs. 101-102	Clinical Pathology I-II	3	3
MAJOR	Nurs. 103	Nursing II	9	
MAJOR	Nurs. 104	Nursing III		9
GE AREA IV	Humanities	Electives	3	3
GE AREA V	T/RS	Elective	3	
			18	15
		SENIOR		
MAJOR	Nurs. 121	Nursing IV	9	
MAJOR	Nurs. 123	Research in Nursing	3	
MAJOR	Nurs. 124	Nursing V		9
GE AREA V	T/RS-Phil.	Elective		3
GE FREE	Electives	Electives	3	3
			15	15

TOTAL: 137 credits

*Departmental Recommendation.

NURS. 14 Staff
Nursing I 6 credits
(Prerequisites: Sophomore status in nursing program) Concepts, principles and theories of nursing practice in relation to support and promotion of adaptation contributing to optimal health. Development of beginning psychomotor skills necessary for the use of the nursing process. Focus on the professional nurse's role in assessing and analyzing the maturational, nutritional and health status of the individual as a member of a family and community. 4 hours lecture and 6 hours laboratory.

NURS. 101-102 Staff
Clinical Pathology I, II 6 credits
(Prerequisites: Chemistry 13-14, Biology 13-14, Biology 125) Mechanisms underlying major common health problems and subsequent pathophysiology, psychopathology and symptomology. Principles guiding diagnosis and therapeutic management including nutritional and pharmacological implications. 3 hours lecture each semester.

NURS. 103 Staff
Nursing II 9 credits
(Prerequisites: Nursing 12, Nursing 14; Corequisite: Nursing 101) Presentation of illness as a human experience as a result of response to life crises, changes in family structure or inadequate body system functioning. Emphasis on the use of the nursing process to provide direct nursing care to individuals and families experiencing alterations in health status. Focus on the role of the professional nurse in promoting and restoring adaptive responses to common health problems in collaboration with clients. 4 hours lecture and 15 hours laboratory.

NURS. 104 Staff
Nursing III 9 credits
(Prerequisite: Nursing 103; Corequisite: Nursing 102) Continuation of Nursing II emphasizing the use of the nursing process in meeting the health needs of clients and families experiencing alterations in health status throughout the life cycle. 4 hours lecture and 15 hours laboratory.

NURS. 121 Staff
Nursing IV 9 credits
(Prerequisites: Nursing 104) Development of management skills in meeting the needs of individuals and families with complex/multiple health problems. Focus on the role of the professional nurse in restoring and maintaining adaptive responses of clients who are critically ill; who have experienced multiple trauma; or who have serious multiple health problems. Emphasis on the use of the nursing process to provide comprehensive care both in hospital and community settings. 4 hours lecture and 15 hours laboratory.

NURS. 123 Dr. Garrett
Research in Nursing 3 credits
(Prerequisites: Senior status in the nursing program, Math 44) Application of the principles and process of research to professional nursing practice. Study of research design, data collection techniques, interpretation and critique of nursing research literature. 3 hours lecture.

NURS. 124 Staff
Nursing V 9 credits
Theoretical foundations of the leadership role of the professional nurse, its responsibilities and obligations. Focus on independent activity and accountability in collaboration with the nursing and interdisciplinary health teams to facilitate adaptation and to promote an optimal level of health in both hospital and community settings. Continued use of the nursing process to manage and provide care to clients, families and communities with complex health problems. 2 hours lecture and 21 hours laboratory.

PHILOSOPHY

DR. McGINLEY, *Chairman*

The basic objectives of the Philosophy Department may be stated as follows:

1) To inspire the student to come to grips with the basic philosophical problems implicit in his experience of the self, others and the universe, together with the question of their relations to ultimate transcendence (God and immortality);

2) To lead him to develop habits of clear, critical thinking within the framework of both an adequate philosophical methodology and accepted norms of scholarship;

3) To introduce him to reading critically the great philosophers, past and present;

4) Finally, through this entire process, to help him to formulate for himself a satisfactory philosophy of life or world-view. Hopefully, such a formulation will ground both his own search for fulfillments as a free person and his meaningful contribution to the world community. In this fashion the Department exercises the specifically illuminating and unifying functions of philosophy as set forth in the basic objective of liberal education adopted by this University.

For the AB degree in Philosophy, the major must take 24 upper division credits in Philosophy in addition to the six credits required of all students. These 24 credits must be distributed as follows: logic (3); history of philosophy (6); contemporary philosophy (6); thematic or problem-centered courses (6); free (3).

Classified as history of philosophy: Phil. 27, 106, 108, 111, 113, 114, 118, 121, 122, 123, 125, 142, 143, 149.
Classified as contemporary: Phil. 109, 117, 119, 123, 128, 129, 132, 133, 135, 137, 147, 148.
Classified as thematic or problem-centered: Phil. 27, 104, 105, 106, 107, 108, 109, 111, 112, 119, 124, 125, 126, 128, 129, 130, 132, 133, 135, 137, 138, 140, 148.

PHIL. 20 Staff
Introduction to Philosophy 3 credits
The purpose of this course is to awaken the beginning student to the basic questions and answers available in philosophy. Contemporary methods are used to understand both current and classical philosophical literature. While important professional texts are used, this course is kept flexible enough to allow the individual professor to develop his own approach to philosophical problems.

PHIL. 28 Dr. Capestany
Logic: The Art of Communication 3 credits
This course will center on a study of the principles of critical thinking, fallacies, degrees of certitude, syllogistic reasoning, language and thought. The practical aspect of logic as it applies to life will be stressed rather than the formal system of logic.

PHIL. 104 Dr. McGinley
Epistemology 3 credits
An historical and analytical examination of the problem of knowledge within the context of the problem of truth. Areas of investigation are authentic and unauthentic thinking and verbalization; the relationship between thought and language; the relationship between thought and experiencing; the critical status of the fundamental positions on the problem of ultimate truth.

PHIL. 105 Dr. Fairbanks
Philosophy of Man 3 credits
This course will deal with the basic questions that confront man. This will involve an analysis of the social situation, a discussion of the implications of this situation for the person as he relates to his environment, and a search for the meaning of the 'whole person'.

ED/P. 106 Dr. Conover
Philosophy of Education 3 credits
Representative modern systematic philosophies of education with a critical analysis of the answers that each system provides to the important questions concerning the nature of knowledge, of value, of man and of society.

PHIL. 107 Drs. Garrett & Capestany
Philosophy of Law 3 credits
A study of the various justifications of law and their implications. Special consideration will be given to the problems of civil disobedience and the force of law in private institutions.

PHILOSOPHY CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Phil. 20-110	Introduction—Ethics	3	3
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA III	Communications	Foreign Language*	3	3
GE AREA III	Communications	Elective		3
GE AREA IV	Humanities	Elective	3	3
GE AREA V	T/RS 21	Introduction to Theology	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			13	16
		SOPHOMORE		
MAJOR	Phil. 28—Elec.	Logic—Thematic Elective	3	3
MAJOR	Phil. Elec.	History of Philosophy Elective		3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA II	Social/Behavior	Electives	6	6
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Philosophy	Thematic and Contemporary Electives	3	3
MAJOR	Philosophy	History of Philosophy Elective		3
COGNATE	Electives	Electives	6	6
GE AREA IV	Humanities	Electives	6	3
GE AREA V	Phil.-T/RS	Philosophy/Religious Studies Elective	3	
GE FREE	Intd.	Interdisciplinary Elective		3
			18	18
		SENIOR		
MAJOR	Philosophy	Contemporary and Free Electives	3	3
COGNATE	Electives	Electives	6	6
GE AREA IV	Humanities	Elective		3
GE FREE	Electives	Electives	6	3
			15	15
			TOTAL:	127 credits

*Departmental recommendations are indicated by an asterisk.

As a freshman Interdisciplinary Elective, the department recommends The Nature of Nature (Intd. 3), team-taught by a philosopher and physicist.

In the Cognate area of 24 hours, the department requires that 12 credits be focused in one field. It should be noted that six credits not required by the department in the Major area are added to the Free Area in senior year. These may be taken in any field including philosophy.

PHIL. 108 Dr. Nordberg
Metaphysics 3 credits
A textual inquiry into the adequacy of philosophers' answer to the fundamental question, "What is?". Special attention will be given to Plato, Aristotle, Aquinas, Kant's critical philosophy, and the issues of nature and history.

PHIL. 110 Staff
Ethics 3 credits
A philosophical study of man's moral experience in terms of his meaning as a person. Themes investigated will include freedom of choice and its limitations in moral responsibility, problems of conscience, the meaning of moral value, the

norm of morality, natural obligation and human rights and their implications for social involvement of the person and his relation to authority. Current moral relativism including "situation ethics" will also be considered.

PHIL. 111 Dr. Capestany
Aesthetics 3 credits
The main theories of the essential character of the beautiful, how it is judged, how it is related to the mind and the whole man, how it is created by the artist, and how this creativity expresses a commitment to oneself and to the world.

PHIL. 112 Dr. Garrett
Logical and Rhetorical Analysis 3 credits
A study of the principles of logic and persuasion, an analysis of fallacies, the principles of structure in written and oral composition. Practice in briefs and abstracts with an emphasis on exactness and clearness. (GE Area III)

PHIL. 113 Dr. McGinley
Ancient Philosophy 3 credits
The Pre-Socratics, Plato, Aristotle and their immediate successors. Special emphasis on the Theory of Knowledge, the Metaphysics and Philosophical Anthropology of Plato and Aristotle.

PHIL. 114 Dr. Capestany
Medieval Philosophy 3 credits
The origin and character of medieval philosophy, early Christian Philosophy, the controversy of the universals, outstanding thinkers of the early scholastic period and the influence of Islamic and Jewish philosophy.

PHIL. 117 Fr. Mohr
Existentialism 3 credits
A critical study of key concepts in existential philosophy through selective works of Kierkegaard, Sartre, Marcel, and Jaspers. Emphasis is placed on the concepts of self and knowledge.

PHIL. 121 Dr. Nordberg
Modern Philosophy I 3 credits
The Renaissance Background: Petrarch and the humanist movement: Galileo and the beginnings of modern science. Descartes: mathesis universalis; the difficulties of the Cartesian method; solution in the one substance of Spinoza. British Empiricism: Locke and the problem of substance; Berkeley's 'Esse est percipi', culmination in Hume and the doctrine of perceptual atomism.

PHIL. 122 Fr. Mohr
Modern Philosophy II 3 credits
Leibniz: Cartesian and Spinozistic heritage, the problem of universal science; the Monodology Kant: influences of Leibniz, Hume and Newton; the "Copernican revolution" and "Transcendental Criticism". Fichte's transcendental idealism and Schelling's absolute idealism. Hegel and Phenomenology of Mind; reality as dialectical. Survey of later trends: Schopenhauer, Nietzsche, Bergson.

PHIL. 123 Dr. Fairbanks
Foundations of 20th Century Philosophy 3 credits
A study of some of the key figures that have set the tone for 20th Century philosophy. Buber, Marx, Kierkegaard, Hume, and Russell are studied in detail.

PHIL. 124 Fr. Jarvis
The Philosophy of Religion 3 credits
The course concentrates in two areas: 1) The philosophy of religion of the American idealist, Josiah Royce, as presented in *The Problem of Christianity*. Here St. Paul's theology of the Church is interpreted in light of Royce's philosophy of community; 2) The phenomenology of religions is the background for considering the philosophy of religious myth, symbolism and language.

PHIL. 125 Fr. Mohr
Language and the Existence of God 3 credits
A study of methods of expressing God's existence in language, this course will examine the proofs for existence of God in Anselm, Thomas Aquinas, and Descartes, analyze Kant's criticism and Hegel's reevaluation of such proofs, and reflect on modern theories of language about God.

PHIL. 126 Dr. Capestany
Idea of a University 3 credits
An investigation of the philosophy of a liberal education, using John Henry Newman's *Idea of a University* as a tool.

PHIL. 131 Dr. Baillie
Political Philosophy 3 credits
Philosophical and ethical analysis of the social nature of man with emphasis on modern social questions. Ethics of the family, of nation and of communities. International ethics.

PHIL. 132 Drs. Garrett and Devine
Medical Ethics 3 credits
(Prerequisite: Philosophy 110) Detailed analysis of the ethical aspects of abortion, euthanasia and preservation of life, sterilization and contraception, artificial insemination, experimentation on human beings, hypnosis, electroshock therapy and psycho-surgery. Recommended for premedical students.

PHIL. 133 Dr. Garrett
Business Ethics 3 credits
(Prerequisite: Philosophy 110) The personal and social ethics of the major areas of decision making in business principles and case work will receive equal stress. Recommended for business majors.

PHIL. 134 Dr. Baillie
20th Century Political Philosophy 3 credits
The philosophical origins and development of the major political alternatives in the 20th Century, including democracy, socialism, communism, and fascism.

PHIL. 136 Prof. Devine
Ethics of Homicide 3 credits
Critical discussion of the principle issues in the morality of killing, including abortion, capital punishment, euthanasia, terrorism and war.

PHIL. 137 Fr. Gannon
Phenomenology of Human Ambition 3 credits
Philosophical study of action, vitality, goals, human appetite, human greatness. The lives of Janis Joplin, Hitler, Vince Lombardi and Ignatius Loyola are required reading.

PHIL. 139 Fr. Gannon
Philosophy of Sexuality 3 credits
This course addresses itself to three questions: What is the natural purpose of sexuality? What need is there in the individual for sexual activity? What norms can be derived for ethical sexual behavior?

PHIL. 140 Fr. Gannon
The Appetites and Passions 3 credits
A "sensate culture" seems, paradoxically, to be an apathetic culture. This course explores human drives and dreams, a matter of importance to philosophers from Aristotle to Sartre, in the light of the whole man, who is indeed much more than drives.

PHIL. 142 Dr. Fairbanks
Peirce and the History of Ideas 3 credits
Pragmatism, the philosophy of signs, his metaphysics, categories and philosophy of religion and science; relationships to earlier philosophers and his future significance in America and abroad.

PHIL. 144 Dr. McGinley
Plato and Pleasure 3 credits
An investigation into and analysis of the pleasure dialogues of Plato. Special attention will be accorded to Lysis, Protagoras, Gorgias, Book IX of Republic and Philebus.

PHIL. 145 Fr. Jarvis
Mysticism East and West 3 credits
Beginning with Jewish and Hellenistic influences upon Christianity, this course presents prayer as found in some of the great Eastern and Western Christian mystical writers. What distinguishes mysticism both as a form of prayer and as an epistemology distinct from other general philosophical tendencies will be studied.

PHIL. 147 Dr. Fairbanks
Philosophy & The Contemporary Novel 3 credits
This course aims at a diverse philosophical interpretation of recent best selling novels that have unusual depth: Vonnegut, Burgess, Crichton.

PHIL. 148 Dr. Garrett
The Philosophy of Communication 3 credits
This course will center on the phenomenon of communication from the non-verbal through the mass media. These observations will serve as a starting point for a metaphysics and an ethics of the interpersonal and social.

PHIL. 159 Drs. Nordberg & Benestad
Great Books I-II 3-6 credits
Major thinkers in the Western philosophical, religious, political and literary traditions. First semester covers classical thought, Hebrew scriptures, early Christian literature and medieval thought. Second semester covers Renaissance, Enlightenment and contemporary thought. First semester for theology credit; second for philosophy credit. See T/RS 158.

PHIL. 191-194 Staff
Senior Tutorial variable credit
A tutorial program open to Juniors and Seniors.

PHYSICAL EDUCATION

DR. WODDER, *Chairman*

The Physical Education Department aims to improve the physical fitness level of each student and improve and increase students' recreational skills. Emphasis is placed on instruction in a wide variety of popular sports, recreational and competitive athletics, especially those with carry-over value for post college years.

Physical Education is required two periods per week through the freshman and sophomore years. One credit hour is granted in Physical Education each semester.

Every regularly enrolled freshman and sophomore student except veterans must satisfy the Physical Education requirement unless excused by the Physical Education Department.

It is possible to be excused from Physical Education classes by application to the Physical Education Department if (a) a physician certifies that a student, for medical reasons, should not engage in vigorous physical activity; (b) a student is a member of an intercollegiate varsity team; (c) the department deems it advisable; (d) veterans.

Grading: S—Satisfactory
U—Unsatisfactory, requiring repetition of course
These grades will not be computed in the Quality Point Index.

Physical Education 1 credit

Students taking physical education may elect from the following: tennis, swimming, yoga, racquetball, weight training, slimnastics, basketball, volleyball, bowling, running, riflery, pistol, karate, self-defense for women, judo, advanced life saving, ballet and modern jazz dance. Four credits are needed for graduation.

PHYS. ED. 108 Prof. Bessoir

High School Coaching 3 credits

Especially useful for those who wish to teach and coach high school, this course is concerned with coaching psychology, organization, training and taping, and fundamentals of sports among other topics. (Applicable only to Free Area of General Education Program.)

John J. Long Athletic Center

PHYSICAL THERAPY

DR. SZUHAY, *Program Director*

The Physical Therapy curriculum was designed to meet the standards developed by the American Physical Therapy Association with a blend of both academic and clinical components. The sequence of courses takes into consideration a basic liberal arts foundation as well as science courses in the first two years. Students begin the professional phase of the program in their junior year.

It is recommended that students take some of the General Education courses listed below in either January Intersession or Summer School in order to reduce the schedule during regular semesters.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
COGNATE	Chem. 13-14	Introductory Chemistry	4	4
COGNATE	Math 13	Pre-Calculus Math	4	
COGNATE	Biol. 1-2	General Biology I-II	4	4
GE AREA III	Communications*	Electives*	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
GE AREA II	Soc. Sci. Elec.	Elective†		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			19	18
		SOPHOMORE		
COGNATE	Biol. 120	General Physiology		4
COGNATE	Physics I	General Physics	4	
GE AREA II	Social Science†	Electives†	3	6
GE AREA IV	Humanities	Electives**	6	6
GE AREA V	T/RS	Electives‡	3	3
GE AREA V	Phil. 110	Ethics	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			20	20
		JUNIOR		
MAJOR	PT 101	Intro. to PT & Patient Care	3	
MAJOR	PT 102	Physical Agents I	4	
MAJOR	PT 103-104	Therapeutic Exercise I-II	4	4
MAJOR	PT 105	Anatomy for Physical Therapy	4	
MAJOR	Phys. 101	Kinesiology & Biomechanics		3
MAJOR	PT 107	Neuro-Sciences		4
MAJOR	PT 108	Seminar: Psycho-Soc. Aspects		2
MAJOR	PT 109	Field Experience in PT	3	
MAJOR	PT 110	Clinical Sciences I		3
COGNATE	PT 106	Physiology for Physical Therapy	4	
GE AREA V	Phil.	Elective		3
			22	19
		SENIOR		
MAJOR	PT 114	Clinical Sciences II	3	
GE AREA IV	Humanities	Electives	6	
MAJOR	PT 111	Therapeutic Exercise III	4	
MAJOR	PT 112	Tests & Measurements	3	
MAJOR	PT 113	Administrative Seminar	2	
MAJOR	PT 198	Clinical Internship I	3	
MAJOR	PT 199	Clinical Internship II		12
			21	12

TOTAL: 151 credits

N.B. January Intersessions should be used to reduce fall or spring course schedules.

*The department recommends Engl. 2 (oral) and Engl 7 (writing) be taken as GE AREA III communications electives in freshman year.

**As GE AREA IV, the department recommends English literature courses.

†For GE AREA II, social science electives, the department recommends Psych 23, H/HS 102, 121-122, Soc. 125, 126, 127.

‡For GE AREA V, the department recommends T/RS 162 and 177.

PT. 101 Staff
Introduction to Physical Therapy and Patient Care 3 credits
(Prerequisite: Majors only) An introduction to Physical Therapy will include the roles of the physical therapists, professional responsibilities, and working environments. The course will present the history and development of the physical therapist and the American Physical Therapy Association. An introduction to patient care responsibilities will include interpersonal communications; safety precautions and legal aspects. Lectures, films, and field visits.

PT. 102 Staff
Physical Agents 4 credits
Theory and practice in the use of light, hydrotherapeutic and heat/cold utilizing electrotherapeutic equipment. Also use of low frequency and electrotherapy techniques including introduction to EMG, nerve conduction, biofeedback and TNS. Specified evaluative techniques and treatment goals are stressed where appropriate. 2 hours lecture, 4 hours lab.

PT. 103 Staff
Therapeutic Exercise I 4 credits
An introduction and overview of therapeutic exercise and an exploration of the basic principles underlying exercise. Introduction to include exercise physiology and muscle physiology. Body mechanics, crutch management, physiological positioning and movement of patients, postural deviations, splinting and bracing, prosthetics and orthotice, therapeutic massage and specialized exercise techniques of physical therapy are presented. 2 hours lecture, 4 hours lab.

PT. 104 Staff
Therapeutic Exercise II 4 credits
This course is a continuation of Physical Therapy 103; an in-depth study in the physical therapy management of orthopedic problems, arthritis, burns, hemiplegia, cord lesions, and other neuromuscular diseases. An introduction to neurophysiological principles used in treating patients with central nervous system disorders will be presented. 2 hours lecture, 4 hours lab.

PT. 105 Staff
Anatomy for Physical Therapists 4 credits
Studies in depth the musculoskeletal and peripheral nervous systems of the human body. Directed laboratory experience using skeletal material, models, audiovisual tapes, etc. 3 hours lecture, 2 hours lab.

PT. 106 Staff
Physiology for Physical Therapists 4 credits
Fundamentals of cell properties and functions will be studied. Functions of the various systems of the body will be discussed. 2 hours lecture, 4 hours lab.

PT. 107 Staff
Neurosciences 4 credits
This course considers the gross and cellular organization of the central nervous system and its relationship to the peripheral somatic and visceral systems; the physiological properties of neurons and their associated structures: the probable mechanisms for the reception and transmission of information and its integration at spinal, supraspinal, and cortical levels. Concepts of normal sensory-motor integration, to include the influence of neural centers on motor activity and postural control will be considered, and clinical manifestations of dysfunction of major neural elements will be discussed. Normal human physical growth and development will also be surveyed.

PT. 108 Staff
Seminar: Psycho-Sociological Aspects 2 credits
This course explores the individual's reaction to his disease or disability and the methods of dealing with a patient undergoing these reactions. Other topics will include the development and customs of the health care system and nutrition in society.

PT. 109 Staff
Field Experience in Physical Therapy 3 credits
This course is an orientation to clinical practice which allows the student to become familiar with different types of treatment facilities. Classroom

and clinical sessions are scheduled to integrate academic and clinical experience including library science and basic research information. Four days in the field and one day on campus for seminars.

PT. 110 Staff
Clinical Sciences I 3 credits
Disease entities of all organ systems of the body are explored with emphasis upon cardiovascular, respiratory, genito-urinary, musculoskeletal, central nervous system and peripheral nervous systems.

PT. 111 Staff
Therapeutic Exercise III 4 credits
This course is a continuation of Physical Therapy 103 & 104. The course is an in-depth application of various neurophysiological methods used in the treatment of disorders of the central nervous system (CNS) including such as Bobath, Brunstomn, properoceptive neuromuscular facilitation (PNF), and Rood techniques. Also included is an introduction to cardiac, pulmonary, cancer rehabilitation; as well as orthopedic assessment, mobilization techniques, and sports medicine. 2 hours lecture, 4 hours lab.

PT. 112 Staff
Tests and Measurements 3 credits
(Prerequisite: PT 105 & 106) Basic evaluative techniques including manual muscle testing, range of motion, posture, orthopedic assessment and activities of daily living are studied as basis for planning treatment programs. Evaluation and testing procedures used to assess motor development on normal and handicapped are emphasized. 2 hours lecture, 2 hours lab.

PT. 113 Staff
Administrative Seminar 2 credits
This seminar will focus upon the principles and practice of supervision and administration. Barriers to and mechanisms for change in the health care system are discussed in relation to the health consumer and the professional health care worker.

PT. 114 Staff
Clinical Sciences II 3 credits
(Prerequisite: PT. 110) This course is a continuation of Physical Therapy 110.

PT. 198 Staff
Clinical Internship I 3 credits
This phase of clinical education provides three full-time experiences conducted under the supervision of qualified physical therapists. These are to include two mandatory internships at a designated rehabilitation center and a general hospital with the third at an optional health care facility with the approval of the Program Director.

PT. 199 Staff
Clinical Internship II 12 credits
This course is a continuation of Physical Therapy 198.

PHYSICS/ELECTRONICS ENGINEERING

PROF. KALAFUT, *Chairman*

The department offers concentrations in Physics, Biophysics, Electronics Engineering and Electronics-Business.

The objectives of the department are to provide skills, understanding, and the methodology required to initiate active participation in the development of new knowledge about the material universe. The approach of the physical scientist and engineer, based as it is on the analysis of mathematical models dealing with matter and energy and their interactions, supplies a unique and important insight to the solution of problems in many disciplines. Consequently, the department's degree programs are uniquely balanced and broad so that each provides the basic skills for many types of successful careers.

The strength of the department is evidenced by the fact that over the last ten years many of its graduates have been successful in further studies leading to the Ph.D. in Physics, and others have pursued successful careers in such fields as Electronics and Electrical Engineering, Nuclear Engineering, Oceanography, Geophysics and Medicine.

PHYSICS MAJOR

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Physics 11-12	Elements of Physics I-II	4	4
COGNATE	Math 13-14 *or* Math 14-21	Pre-Calculus Math.-Calculus I Calculus I-II	4	4
GE AREA III	Communications	Elective	3	
GE AREA II	Social/Behavioral	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15	15
		SOPHOMORE		
MAJOR	Physics 21-22	Elements Modern Physics—Statistics	4	3
COGNATE	Math. 21-22 *or* Math 22-101	Calculus II-III Calculus III—Differential Equations	4	4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			18	17
		JUNIOR		
MAJOR	Phys. 104-105	Electricity and Magnetism I-II	4	4
MAJOR	Phys. 102-110	Mechanics—Atomic Physics	3	4
COGNATE	Math. 101-Phys. 118	Differential Equations—Mathematical Physics	4	4
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
			17	18
		SENIOR		
MAJOR	Phys. 111-123	Nuclear Physics—Advanced Mechanics	3	3
MAJOR	Phys. 121	Physics Research	1	1
GE AREA II	Social/Behavior	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
GE FREE	Elective—Intd.	Elective—Interdisciplinary Elective	3	3
			16	13

Students who begin with Math 14 select another course in the Cognate area; CMPS 20 is recommended.

TOTAL: 129 credits

ELECTRONICS ENGINEERING MAJOR

Engineering is the profession in which a knowledge of the mathematical and natural sciences gained by study, experience, and practice is applied with judgement to develop ways to utilize, economically, the materials and forces of nature for the benefit of mankind. The Electronics Engineering concentration prepares the student for the analysis and design of electronic devices whose principal functions are the shaping and control of information.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Phys. 11-12	Elements of Physics I-II	4	4
COGNATE	Math. 14-21	Calculus I-II	4	4
GE AREA III	CMPS. 20	Intro. to Computer Sci.	3	
GE AREA III	Communications	Elective*		3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS ED	Ph. Ed. 1-2	Basic Physical Education	1	1
			18	18
		SOPHOMORE		
MAJOR	Phys. 21	Modern Physics	4	
MAJOR	EE. 24	Circuit Analysis I		4
MAJOR	Engr. 21-22	Statics—Dynamics	3	3
COGNATE	Math. 22-101	Analysis III—Diff. Equations	4	4
COGNATE	Chem. 11-12	General Analytical Chemistry	4½	4½
GE AREA II	Soc./Behavioral	Elective		3
GE AREA IV	Humanities	Elective	3	
PHYS ED	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½
		JUNIOR		
MAJOR	Phys. 104-105	Elect. and Magn. I and II	3	3
MAJOR	EE. 106-107	Elect. Principles & Circuits I-II	4	4
MAJOR	EE. 112	Electronic Instrument Design		4
COGNATE	Phys. 118	Mathematical Physics I	4	
GE AREA III	EE. 113-114	Computer Design Lab	1	2
GE AREA IV	Humanities	Elective	3	
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Elective		3
GE FREE	Intd.	Elective		3
			18	19
		SENIOR		
MAJOR	EE. 108	Advanced Electronics	4	
MAJOR	Elective	Electronics Design Project or Physics Electives	3	3
GE AREA II	Social/Behavioral	Electives**	6	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Electives	3	3
GE FREE	Elective	Elective***		3
			19	15

TOTAL: 146 credits

*In Freshman year, for General Area III (Communications), the Department recommends Engl. 7 (Writing Center).

**In GE AREA II, the Department recommends Economics 11-12.

***Department recommends EE. 100, Advanced Circuit Analysis.

BIOPHYSICS

The Bio-Physics major is designed to prepare a student to apply the physical and mathematical sciences to problems arising in the life sciences and medicine. By proper electives, the student can prepare to enter graduate study of bio-physics, biology, bio-chemistry, medicine or dentistry.

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Biol. 1 and 2	General Biology 1-2	4	4
MAJOR	Physics 11-12	Elements of Physics I and II	4	4
COGNATE	Math. 13-14 *or* Math. 14-21	Pre-Calculus Math—Calculus I *or* Calculus I-II	4	4
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Phys. 21-22	Modern-Statistical Physics	4	3
MAJOR	Biology or Chem.	Electives	4	4
COGNATE	Math 21-22 *or* Math 22-101	Calculus II-III Calculus III—Diff. Equations	4	4
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19	18
		JUNIOR		
MAJOR	Phys., Biol., Chem.	Elective	3	
MAJOR	Phys., Bio, & Chem.	Elective		3
COGNATE	Chem. 101-102	Organic Chemistry I-II	4½	4½
GE AREA II	Social/Behavior	Elective	3	3
GE AREA IV	Humanities	Elective	6	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Intd.	Interdisciplinary Elective	3	
			19½	19½
		SENIOR		
MAJOR	EE 112	Electronic Instr. Design	4	
MAJOR	Physics 184	Biophysics		3
MAJOR	Phys., Bio., & Chem.	Elective	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
			16	15

TOTAL: 139 credits

ELECTRONICS-BUSINESS MAJOR

The state of the business world today is such that a major portion of its administrative effort must be geared to the supervision of persons engaged in complex technological processes often involving applications of electronics. As a consequence, the ideal administrator is now one who is conversant with both good business practice and technological know-how.

The Electronics-Business major provides a student with a program of carefully selected business and economics courses coupled with a series of coordinated physics and electronics engineering courses so as to provide preparation for an administrative career in an electronically oriented business enterprise. The program also provides sufficient preparation for further studies leading to either the Master of Science in Solid State Electronics or the Master's in Business Administration.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Phys. 11-12	Elements of Physics	4	4
COGNATE	Math. 13-14 *or* Math 14-21	Pre-Calculus Math.—Calculus I Calculus I-II	4	4
GE AREA II	Econ. 11-12	Principles of Economics I-II*	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15	15
		SOPHOMORE		
MAJOR	Acc. 3-4	Basic Financial, Managerial Acct.	3	3
MAJOR	Math. 104	Statistics		3
MAJOR	EE 24	Circuit Analysis I		4
COGNATE*	Math. 21-22 *or* Math 22-101	Calculus II-III *or* Calculus III—Diff. Equations	4	4
GE AREA III	Communications	Electives**	3	3
GE AREA IV	Humanities	Electives	6	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			17	18
		JUNIOR		
MAJOR	EE 106-107	Electronic Prin. and Circuits I-II	4	4
MAJOR	EE 113	Computer Design Lab	1	
MAJOR	Mgt. 109	Intro. to Management Science	3	
GE AREA II	Soc./Behavior	Elective		3
GE AREA III	Communications	Elective***	3	
GE AREA IV	Humanities	Elective	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS Elec.	Theology Elective	3	
GE FREE	Intd.	Interdisciplinary Elective		3
			17	16
		SENIOR		
MAJOR	Mar. 107-Mgt. 108	Managerial Marketing—Organization & Management	3	3
MAJOR	Fin. 110-Mgt. 115	Corporation Finance—Production and Operations Management	3	3
MAJOR	EE 112	Electronics Instrument Design		4
MAJOR	Physics 104	Electricity & Magnetism I	3	
GE AREA II	Social Science	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Electives	3	3
			18	16

TOTAL: 132 credits

*Departmental recommendation.
**Engl. 2 and Engl. 7 recommended.
***CMPS 20 recommended.

PHYS. 1 & 2 Staff
General Physics 8 credits
(Prerequisite: Mathematics 13-14) General college course for pre-medical, pre-dental and biology majors. Mechanics, heat, electricity and magnetism, sound, light and modern physics. Three hours lecture and recitation and two hours laboratory.

PHYS. 5 Dr. Murray
Evolution of the Universe 3 credits
Designed to give a qualitative understanding of current physical theories concerning the origin of the Universe, the formation of the elements and of stars and planets. The life cycle of stars, the formation of geological formations on earth, and theories concerning the beginnings of life.

PHYS. 7 Dr. Hussain
Astronomy of Stars and Galaxies 3 credits
Introductory course for non-science students. Basic ideas about birth and death of stars. Red giants, white dwarfs, neutron stars and black holes. Star clusters and galaxies. Observational basis for astronomy.

PHYS. 8 Prof. Kalafut & Dr. DiStefano
Everyday Physics 3 credits
Practically-oriented course for non-science majors correlating physical concepts with everyday problems encountered with electrical devices and automobiles so that students can effect simple maintenance and repairs. Two hours lecture and demonstration; two hours laboratory.

PHYS. 9 Prof. Kalafut & Dr. Hussain
Energy and the Environment 3 credits
A course for non-science majors that emphasizes the various aspects of man's use of energy and changes in the environment that accompany that use. Sources of energy; the nature of the present energy and environmental crises and possible solutions; energy requirements of the future; conservation and alternate energy sources.

PHYS. 10 Dr. Hussain
Solar System Astronomy 3 credits
This course reviews for non-science students, the basic facts about the sun and planets. A historical treatment culminating in latest space probe data. Theories on origin of solar system are presented. Opportunity for astronomical observation.

PHYS. 11 & 12 Staff
Elements of Physics 8 credits
(Corequisite: Mathematics 14-21) Basic college course, employing methods of the calculus, for physics, electronics, mathematics, and chemistry majors. Mechanics and heat, sound, light, electricity and magnetism. Three hours lecture and recitation and two hours laboratory.

PHYS. 21 Staff
Elements of Modern Physics 4 credits
(Prerequisite: Physics 12) Introductory Modern Physics course for physics and electronics majors; also recommended for other science students. Review of classical physics, introduction to atomic and nuclear physics. Three hours lecture and recitation and two hours laboratory.

PHYS. 22 Staff
Statistical Physics 3 credits
(Prerequisites: Physics 21, Mathematics 22) An intermediate course designed to show how the basic notions of atomic theory lead to a coherent conceptual framework capable of describing and predicting the properties of macroscopic systems consisting of many atoms or molecules. It provides an introduction to the subjects of Statistical Mechanics, Kinetic Theory, Thermodynamics, and Heat. Recommended for physics majors. Three hours lecture.

PHYS. 25-26 Dr. McGinnis
Role of Electronics in Communication 3 credits
Fundamentals of conversion of audio and visual signals to electrical signals. Transducer, microphones, cameras. Transmission of electrical signals, reception and reconversion back to audio or visual. Electro-magnetic storage of information. These six credits are sufficient to prepare the student for the second class radiotelephone operator's examination.

PHYS. 101 Staff
Kinesiology and Biomechanics 3 credits
(Prerequisites: Physics 1 and Math 13) This course is designed to emphasize the functional interrelationships of the muscular, skeletal, and articular systems. Principles of engineering mechanics are applied to the activities and the fundamental knowledge of the physical therapist. Both normal and pathological functions are examined.

PHYS. 102 Staff
Mechanics 3 credits
(Prerequisite: Physics 12; Corequisite: Mathematics 101) Introduction to theoretical mechanics treating statics and dynamics of particles and extended bodies; motion of bodies by conservative and dissipative forces; energy relations; generalized coordinates and Lagrange's equations.

PHYS. 103 Staff
Optics 4 credits
(Prerequisite: Physics 21) Review of Geometrical optics. Image formation by thick and thin lenses. Lens aberrations. Introduction to plane and spherical wave equations. Fraunhofer and Fresnel diffraction. Interference. Polarization. Introduction to quantum optics using the LASER. Three hours lecture. Two hours laboratory.

PHYS. 104 Staff
Electricity and Magnetism I 3-4 credits
(Prerequisite: Physics 21; Mathematics 101 may be taken concurrently) Analytical treatment of electrical and magnetic theory; electrostatic fields; direct currents and circuits; measurements; magnetism. Lecture and laboratory required of Physics majors: D.C. circuit characteristics and measurements. Magnetic field measurements. Electronics majors take lecture only and EE 113 for laboratory.

PHYS. 105 Staff
Electricity and Magnetism II 3-4 credits
(Prerequisites: Physics 104, Mathematics 101) Electromagnetic induction, circuit transients, alternating current circuits; measurements; electromagnetic fields and waves. Lecture and laboratory required of Physics majors: D.C. circuit transients and A.C. circuit measurements. Electronics majors take lecture only and EE 114 for Laboratory.

PHYS. 110 Staff
Atomic Physics 4 credits
(Prerequisite: Physics 21 & Mathematics 101) Intensive and quantitative treatment of modern Atomic Physics with particular emphasis on atomic structure, introducing the principles and techniques of the Quantum Theory. Required of physics majors. Three hours lecture and three hours laboratory.

PHYS. 111 Staff
Nuclear Physics 3 credits
(Prerequisite: Physics 110) The study of nuclear models and force theories. Natural and induced radioactivity, theory and measurement of alpha, beta and gamma decay; nuclear reactions including fission and fusion. Three hours lecture.

PHYS. 118 Staff
Mathematical Physics I 4 credits
(Prerequisite: Math 101) Determinants and Matrices. Fourier Series. Laplace Transformations. Introduction to Partial Differential Equations and Boundary Value Problems. Special Functions of Physics, including Bessel Functions, Legendre Polynomials, etc.

PHYS. 120 Staff
Undergraduate Physics Theses 1 credit
(Prerequisites: 24 credits in physics; 20 credits in mathematics) Recommended for senior physics majors; for the purpose of evaluating the student's capacity for individual study and research on a specific physical problem. Assignment of problem to be arranged with the department Chairman.

PHYS. 121 Staff
Undergraduate Physics Research variable credit
Recommended for senior physics students who pursue a specific physical research project to gain experience with research literature, techniques and equipment. Projects are recommended by members of the department and approved by the Chairman. Written report required.

PHYS. 123 Staff
Advanced Mechanics 3 credits
(Prerequisite: Physics 102) Variational principles and Lagrange's equations. Euler's equations of motion; Hamilton's equations of motion; canonical transformations; Hamilton-Jacobi theory. Recommended for physics majors.

PHYS. 125 Staff
Radiation Science 3 credits
(Prerequisite: Physics 12 or Physics 2) Introduction to the detection of alpha, beta, gamma, X-ray and neutron emissions. Primary emphasis is placed on measurement but some time is devoted to theory of radioactive decay. Emphasis is also placed on safety precautions and dangers associated with the various types of radiation. (2 hrs. lecture, 2 hrs. laboratory)

PHYS. 153 Staff
Mathematical Physics II 3 credits
Functions of a Complex Variable. Infinite Series in the Complex Plane. Theory of Residues. Conformal Mapping. Fourier and Laplace Transforms. Advanced Partial Differential Equations. Boundary Value Problems in Physics. Green's Functions.

PHYS. 184 Dr. Fahey
Biophysics 3 credits
(Prerequisite: Physics 22) Introduction to the theory of transport phenomena that are significant both in the living cell and in the physical characterization of bio-macro molecules from the standpoint of statistical mechanics and non-equilibrium thermodynamics. Molecular resonance phenomena are also covered. (3 hrs. lecture)

ENGR. 21 Staff
Engineering Mechanics-Statics 3 credits
(Prerequisite: Physics 11; Corequisite: Mathematics 21) Various types of force systems; resultants and conditions of equilibrium; stress analysis of the parts of different types of structures by graphical, algebraic and vector methods; frictional forces; centroids, and second moments of areas and solids.

ENGR. 22 Staff
Engineering Mechanics-Dynamics 3 credits
(Prerequisite: Engineering 21; Corequisite: Mathematics 22) Kinematics of particles and rigid bodies which includes linear, curvilinear, angular and relative motions; inertia, forces, impulse, momentum, work, energy and power; mechanical vibrations.

EE. 24 Staff
Circuit Analysis 4 credits
(Prerequisite: Physics 21) Intermediate course treating Kirchoff's Laws, resistance networks, steady state and transient condition in RC, RI, and RLC networks, Thevenin's and Norton's Theorems, and simple electronic devices and their equivalent circuits. Three hours lecture and two hours laboratory per week.

EE. 100 Staff
Circuit Analysis II 3 credits
(Prerequisites: EE 24; Mathematics 101) General electrical network theorems; analysis of general electrical circuits; three-phase circuits; filters. Three hours lecture.

EE. 106 Staff
Electronic Principles and Circuits I 4 credits
(Prerequisites: EE 24; Mathematics 22) Physical principles of semiconductor device characteristics; analysis of diode circuits. Three hours lecture and two hours laboratory.

EE. 107 Dr. DiStefano
Electronic Principles and Circuits II 4 credits
(Prerequisite: EE 106) General analysis of basic transistor and vacuum tubes amplifiers. Includes DC biasing and AC equivalent circuits at high and low frequencies. Introduction to digital circuits. Three hours lecture and two hours laboratory.

EE. 108 Staff
Advanced Electronics 4 credits
(Prerequisite: EE. 107) Applications of electronic devices to high and low pass amplifiers, feedback amplifiers, linear amplifiers and various digital circuits. Three hours lecture and two hours laboratory.

EE. 112 Dr. McGinnis
Electronic Instrument Design 4 credits
(Prerequisite: EE. 24 and Math 101) Laboratory oriented course designed to acquaint Electronic Engineering students with the operation and design characteristics of electronic instrumentation. Analysis of existing electronic instruments used in various sciences as well as design of special instrumentation. Emphasis on use of operational amplifiers in design situations. Two hours lecture, four hours laboratory.

EE. 113 Dr. DiStefano
Computer Design Laboratoy I 1 credit
(Prerequisite: None) Introduction into the design, construction and testing of digital logic circuits. Applications include simple logic circuits, adders, flip-flops, registers, counters, memories and calculators. Two hours laboratory.

EE. 114 Dr. DiStefano
Computer Design Laboratory II 2 credits
(Prerequisite: Physics 113) Introduction into the design, construction and testing of digital logic circuits. Applications include microprocessors, static and dynamic memories, input/output devices and their interfaces. Two hours laboratory.

EE. 122 Staff
Senior Electronics Design Project 6 credits
Students work with a faculty advisor or a practicing electronics engineer to consider realistic, generally unsolved problems from current technology. Projects involve creative conception, design, development and evaluation. Written and oral presentation of the subject before a group of faculty and visiting evaluators is required.

POLITICAL SCIENCE

DR. DeMICHELE, *Chairman*

The Bachelor of Science degree program in political science aims to accomplish the following objectives: 1. to give the student a thorough understanding of the nature and purposes of civil society; 2. to impart a sound knowledge of the philosophical basis of democracy; 3. to enable him to appreciate the problems of his own government at work; and 4. to relate the American system to the governments of other states in the international community.

POLITICAL SCIENCE

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Pol. Sci. 11-12	Political Science Inquiry I-II	3	3
COGNATE	Hist. 1-2	United States History	3	3
COGNATE	Math. 1-2	Math. Discovery I-II	3	3
GE AREA III	Communications	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
GE FREE	Elective	Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Pol. Sci. 101-102	American National Government	3	3
COGNATE	Hist. 3-4	Europe: 1500 to the Present	3	3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Pol. Sci. 114	Western Political Thought		3
MAJOR	Pol. Sci.	Electives*	3	6
COGNATE	Soc. Sci.	Social Science Elective	3	
COGNATE	Pol. Sci. 133	Political Science Statistics	3	
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy or Theology/Religious Studies		3
GE FREE	Elective-Intd.	Elective-Intd.	3	3
			15	18
		SENIOR		
MAJOR	Pol. Sci.	Electives	6	6
GE AREA I	Nat. Sci./Quant.	Elective	3	
GE AREA IV	Humanities	Electives	6	6
GE AREA V	Phil.-T/RS	Philosophy or Theology/Religious Studies		3
			15	15

TOTAL: 127 credits

As Communications elective in GE AREA III, the department recommends English 2 and 7 and Comm. 114. For GE AREA IV Humanities electives, the department recommends Hist. 122-23, 142-3. In the GE FREE AREA, the department recommends a modern foreign language in junior year with subsequent language courses to follow in senior year as part of GE AREA IV (humanities). The departmental advisor should be consulted.

*Pol. Sci. 136 (Statistics II) is recommended as elective in spring semester of junior year, particularly for students planning on graduate school.

PUBLIC ADMINISTRATION-PUBLIC AFFAIRS

Intended to improve society by providing professional and pre-professional training for men and women who seek careers as agency administrators, program directors, staff analysts in local, state or federal government, or other public service organization, the public affairs/public administration major is also specially suited for those who wish to pursue graduate studies in law, political science, business, planning development.

Analytical and quantitative skills are developed in combination with a firm background in the social and behavioral sciences in order to provide: 1. substantive knowledge of a range of societal problems, the unique political environment in which the problems exist, and management systems for achieving implementation of policy decisions; 2. management skills in the areas of motivation of leadership, organizational management, personnel management and program evaluation; 3. sensitivity to values of public interests, equal rights, economic, social, cultural and religious institutions.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Pol. Sci. 5-6	Introduction to Public Administration	3	3
COGNATE	Econ. 11-12	Modern Economic Society	3	3
GE AREA I	Math 1-2	Math Discovery	3	3
GE AREA III	Communications	Communications Electives*	3	3
GE AREA V	Phil. 20	Introduction to Philosophy		3
GE AREA V	T/RS 6	Belief and Unbelief	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
COGNATE	Pol. Sci. 101-102	American National Government	3	3
COGNATE	Pol. Sci. 133-136	P.S. Statistics I & II	3	3
COGNATE	Acc. 3-4	Basic Financial Managerial Accounting	3	3
GE AREA III	Communications	Elective	3	
GE AREA IV	Electives	Electives***	3	3
GE AREA V	Phil. 110	Ethics		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Pol. Sci. 131-108	Public Law—Legislative Processes	3	3
MAJOR	Pol. Sci. 105-106	State Government-Local Government	3	3
MAJOR	Pol. Sci. 183	Organization Theory & Behavior	3	
COGNATE	Soc. 21	Principles of Sociology		3
GE AREA V	T/RS	Elective	3	3
GE FREE	Elective-Intd.	Elective—Interdisciplinary	3	3
			15	15
		SENIOR		
MAJOR	Pol. Sci. 112	Politics of the Budgetary Proc.	3	
MAJOR	Pol. Sci. 186	Public Policy		3
MAJOR	Pol. Sci. 195	Practicum/Internship		3
MAJOR	Pol. Sci. Electives	Electives**	3	3
GE AREA I	Nat. Sci./Quant.	Elective	3	
GE AREA IV	Humanities	Electives***	6	6
GE AREA V	Phil./TRS	Elective	3	
			18	15

TOTAL 127 credits

*Department recommends English 2 & 7 for AREA III Electives.

**Major electives to be selected in consultation with advisor.

***Department recommends History 1-2 & History 3-4 for AREA IV Electives.

INTERNATIONAL STUDIES

A major in International Studies seeks to provide the student with a full recognition and understanding of the multitudinous forces which shape the contemporary world—nationalism, wars, political and economic ideologies, cultural differentials, and modern technology. Such a broad knowledge and understanding of world affairs can be utilized in careers in teaching, international business, the legal profession, journalism, the Foreign Service of the United States, and other government agencies.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	History 1-2	United States History	3	3
COGNATE	Pol. Sci. 101-102	American National Government	3	3
COGNATE	Language	Elementary or Intermediate	3	3
GE AREA III	Communications	Communications Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy		3
GE AREA V	T/RS 21	Introduction to Theology	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	History 3-4	Europe: 1500 to Present	3	3
MAJOR	Pol. Sci. 111-130	Internatl. Rel.—Internatl. Develop.	3	3
GE AREA II	Economics 11-12	Modern Economic Society	3	3
GE AREA III	Language	Intermediate or Advanced	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	T/RS Elective**	3	
PHYS EDUC	Ph. Ed.	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	History or Pol. Sci.	Electives*	6	6
COGNATE	Electives	Electives†	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA V	Phil.-T/RS	Electives**	3	3
GE AREA	Intd.	Interdisciplinary Elective‡		3
			15	18
		SENIOR		
MAJOR	Pol. Sci. 180	Seminar		3
MAJOR	History or Pol. Sci.	Electives*	3	
COGNATE	Electives	Electives†	3	3
GE AREA I	Nat. Sci./Quant.	Elective	3	
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA FREE	Elective	Elective		3
			15	15

TOTAL: 127 credits

*Major electives to be selected from P.S. 115, P.S. 116, H/P.S. 120, H/P.S. 121, P.S. 140, P.S. 134, H/P.S. 148, Hist. 151, H/P.S. 152, Hist. 161, Hist. 162, P.S. 175, H/P.S. 176, H/P.S. 179.

**Department recommends T/RS 178 and 179 as AREA V electives.

†Department recommends cognate electives be used if needed to complete a language sequence up to the advanced level; otherwise, it is recommended that they be used for appropriate course sequences in the School of Management such as Mgt. 108-Mgt. 168; Mar. 107-Mar. 167; or additional course work in economics/finance, for which AREA II electives can also be applied.

‡Department recommends Intd. 20, Dynamics of Hunger, to meet the Interdisciplinary requirement.

POL. SCI. 5 Dr. Champney
Introduction to Public Administration I 3 credits
Introduction to the study of the public bureauracy. Issues of organization, staffing and financing are considered. The politics of budgeting and of bureaucratic behavior.

POL. SCI. 6 Dr. Champney
Introduction to Public Administration II 3 credits
(Prerequisite: Pol. Sci. 5) Introduction to the analysis of public policies. Problems in the innovation, implementation and evaluation of public programs are analyzed. PPBS and alternative budgeting systems.

POL. SCI. 11 Staff
Political Science Inquiry 3 credits
An introduction to the major concepts, goals and philosophical foundations of political inquiry, including description of the scope of contemporary political science and its sub-fields.

POL. SCI. 12 Staff
Political Science Inquiry II 3 credits
Inquiry into political institutions and processes of industrial democracies; Communist state systems; and developing nations.

POL. SCI. 101 & 102 Staff
American National Government 6 credits
An analysis of society, state, authority, and common good. Forms of government. The constitution, federalism, structure, operations and functions of the three branches.

H/P 103 Dr. Feller
Saving America's Past 3 credits
An introduction to the problems of the changing urban-suburban environment. Using Lackawanna County as a model study region, the issues of urban planning, architectural recyclying, historic preservation and citizen awareness will be explored. Approach: walking tours of Scranton and surrounding communities.

POL. SCI. 104 Staff
Presidential Elections 3 credits
An examination of the process by which the American Chief Executive is selected, including primaries, conventions, campaigns and other factors.

POL. SCI. 105 Prof. Scully
State Government 3 credits
The natural constitutional position of the states and the changing federal-state relationships. State governments in actual operation. Emphasis on Pennsylvania and actual problems of procedure and policy.

POL. SCI. 106 Prof. Scully
Local Government 3 credits
Types and evolution of local government; constitutional and statutory limitations; functions of divisions; structure and operation.

POL. SCI. 107 Staff
Special Topics in Public Administration 3 credits
An inquiry into the new organizational theory; management dynamics; recent developments affecting administrative policy-making such as collective bargaining.

POL. SCI. 108 Dr. Dougherty
American Legislatures 3 credits
An investigation into the legislative process at both federal and state levels. Special attention is given to the structure for decision-making; partisan and interest-group influences; executive and judicial interactions.

POL. SCI. 110 Dr. Dougherty
Introduction to American Law 3 credits
An inquiry into the major theories of jurisprudence; development of American legal theory and practice; structure, functioning, and contemporary problems of the federal and state court systems.

POL. SCI. 111 Staff
International Relations 3 credits
A survey of workings in the nation-state system; power politics; equilibrium mechanisms; organizational functionalism; Third World.

POL. SCI. 112 Prof. Scully
The Politics of Budgetary Process 3 credits
An ind-depth analysis of the procedures, forms and decisional process involved in the preparation of governmental budgets. Emphasis placed on the development of the national budget and executive department lobbyists.

POL. SCI. 114 Staff
Western Political Thought 3 credits
The roles of state and society, the auxiliary agencies and functions of government as viewed by political philosophers from Plato to Marx.

POL. SCI. 115 Dr. Dougherty
Modern Political Thought 3 credits
A study of the theoretical foundations of the three major political idea-systems identified with the twentieth century; communism, fascism, and democracy.

POL. SCI. 116 Dr. Dougherty
Third World Idea Systems 3 credits
An inquiry into the idea-systems of emerging nations in the Third World: nationalism, democratic socialism, elitism, regionalism.

POL. SCI. 117 Prof. Scully & Dr. Dougherty
Regulatory Process 3 credits
An inquiry into the modes of federal and state regulation of business practices in the public interest.

H/PS 120-121 Dr. Hueston
American Diplomatic History 6 credits
A study of American diplomatic history and principles. The Revolution. Early American policies on isolation and expansion. The Monroe Doctrine. Manifest Destiny. American imperialism and the Spanish-American War. Latin American diplomacy in the twentieth century. World War I. World War II. Cold War. Contemporary problems.

H/PS 122-123 Prof. Scully
American Constitutional and Legal History 6 credits
(Recommended for background: History 1 & 2 and Pol. Sci. 101-102) The juridical concepts of the colonial and revolutionary periods; background of the Federal Convention; the nature of the Constitution, its interpretation by Marshall and Taney. The constitutional problems occasioned by the Civil War; the new amendments; the role of the States in a Federalist system. Key cases analyzed in detail and set in historical perspective.

H/PS 124-125 Prof. Scully
American Political and Social Thought 6 credits
(Recommended for background: History 1 & 2) An inquiry into the major philosophies which helped shape our institutions. Puritan concepts; view of the independents; pre-Revolutionary society and thought and the notion of independence; the Constitution as it represents a compromise between the conservative and liberal traditions; Jeffersonian and Jacksonian democracy; social, economic, and political ramifications of the slavery question. Triumph of the nationalist view; recent tendencies; liberty in American society.

POL. SCI. 126 Prof. Scully
The Political Parties of the United States 3 credits
The origins, nature and functions of parties under our American system of government.

POL. SCI. 127 Prof. Scully
American Intergovernmental Relations 3 credits
A comprehensive treatment of all aspects of inter-governmental relations including regional and sectional as well as federal-state, federal-local and state-local.

POL. SCI. 128 Staff
Special Topics in Political Science 3-6 credits
Study and analysis of selected topics in the field of Political Science. The particular topic or topics will vary from year to year depending on the instructor and changing student needs.

POL. SCI. 130 Dr. Dougherty
International Development 3 credits
Designed to familiarize the student with multi- and bilateral aid programs for facilitating modernization of Third World nations—as well as with problems inherent in accelerated socioeconomic change.

POL. SCI. 131 Dr. Dougherty
Administrative Law 3 credits
Processes of public decision-making; access to information; suits against government and its officers; public law and private right; use of case method.

POL. SCI. 132 Prof. Scully
The Urban Crisis 3 credits
The course will examine the interaction between the federal government and the cities including traditional backgrounds, relations during the 19th and 20th centuries, the effect of the New Deal, the role of the Supreme Court in a federal system, role of the Federal Government since the New Deal; the impact of the Housing and Community Development Act of 1974, the fiscal dilemma confronting major cities and federal alternative solutions.

POL. SCI. 133 Prof. Champney
Political Science Statistics I 3 credits
Discussion of the principles, concepts and rationale which underlie the "scientific" approach to the study of political phenomena. Introduction to the quantitative and statistical research strategies which this approach has generated, including simple contingency table analysis, the chi squared statistic and the gamma statistic.

POL. SCI. 136 Dr. Champney
Political Science Statistics II 3 credits
(Prerequisite: P.S. 133) A detailed analysis of the quantitative and statistical research strategies which the "scientific" approach to the study of political phenomenon has generated, including simple correlation, partial correlation and multiple regression techniques.

POL. SCI. 140 Prof. Williams
Geopolitics 3 credits
A study of geographic factors on World History. Geographic factors in national power and international relations; an analysis of the role of "Geopolitics" with reference to the current world scene.

H/PS 142 Dr. DeMichele
English Constitutional and Legal History to 1485 3 credits
Anglo-Saxon basis; fusion of Anglo-Saxon and Norman political institutions; Angevin innovations; Magna Carta; concept of representation; beginnings of the Common Law; jury system; content for government; emergence of Parliament; the refinement of government.

H/PS 143 Dr. DeMichele
English Constitutional and Legal History, 1485 to the Present 3 credits
Tudor absolutism; struggle between royal prerogative and Parliament; rise of the House of Commons; Parliamentary supremacy after 1688; development of Cabinet government; democratic reforms; Parliamentary Bill of 1911; extension of administrative law.

H/PS 148 Dr. Homer
War and Modern Society 3 credits
Role of military force in international relations; historical background focusing on wars, American and European, of 19th and 20th centuries; theories of function of war; arms control and deterrence of war.

H/PS 152 Dr. Earl
Soviet Foreign Policy 3 credits
Examination of the course of Soviet Foreign Policy from 1917 to present. Analysis of forces, factors and motives that have molded Soviet history and its relations with other nations.

POL. SCI. 155 Prof. Scully
The Chief Justices 3 credits
An examination of tenures of the Chief Justices of the United States. Special emphasis will be given to the major decisions of each tenure and the impact the decisions have on American Constitutional Doctrine.

POL. SCI. 175 Dr. DeMichele
Contemporary World Problems 3 credits
Focus on major problems which continually confront world in modern times. U.S. problems emphasized: war, violence, poverty, ecology.

H/PS 176 Dr. DeMichele
World Politics 3 credits
Deals directly with the political, economic, and social issues that are current in international affairs including the future possibilities of world order and the crises of foreign policy-making.

POL. SCI. 181 Dr. Champney
Political Behavior 3 credits
Major approaches to the study of the impact of individual attitudes and behaviors on the distribution of power in society, including mass and elite attitudes and behaviors in the U.S. and in a comparative perspective.

POL. SCI. 183 Staff
Organization Theory and Behavior 3 credits
An analysis of functions and dysfunctions of the modern bureaucratic organization, as related to personal, social, and cultural values with special emphasis on public sector models.

POL. SCI. 184 Staff
Public Personnel Management 3 credits
An examination of the unique, legal and political environment of public employment, including civil service, testing, interviewing, and affirmative action.

POL. SCI. 185 Staff
Public Sector Labor Relations 3 credits
A study of public sector labor relations, including the collective bargaining process and a comparison between the public and private sector.

POL. SCI. 186 Prof. Champney
Public Policy Topics 3 credits
Problems of definition, formulation, implementation and evaluation of policies in specific issue areas; e.g., social welfare policy, environmental policy and foreign policy.

H/PS 188 Drs. Earl & DeMichele
Ethnic & Racial Minorities in Northeastern Pennsylvania 3 credits
(See description under History.)

POL. SCI. 195 Staff
Political Science Internship 3-6 credits
Designed to broaden the educational experience of students by providing practical experience for them with various public agencies and institutions. Supervision by faculty member and agency supervisor.

PSYCHOLOGY

DR. O'MALLEY, *Chairman*

The faculty in Psychology seeks to: 1. prepare the student with a basic, systematic knowledge of psychological method and content; 2. provide the able student with scholarly learning experiences in preparation for successful graduate study; 3. complement the offerings of other departments with courses of value to general education or of worth to the specific majors of these departments.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Psych. 23-26	Fundamentals of Psych.—Theories of Personality	3	3
COGNATE	Math. 1-2 or 3-4	Math. Discovery I-II or Quantitative Methods†	3	3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph.Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Psych 148-24	Social Psychology—Psych. Stat. I	3	3
MAJOR	Psych. 145-144	Abnormal Psyc.*—Childhood & Early Adolescence	3	3
COGNATE	Elec.-Biol. 107	Elective—Anatomy & Physiology	3	3
GE AREA II	Soc. 21-22	Principles of Sociology—* Social Problems*	3	3
GE AREA III	Communications	Elective	3	
GE AREA V	Phil. 110	Ethics		3
PHYS EDUC	Ph.Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Psych. 141-Elec.	Psych. Measurement—Elective	3	3
MAJOR	Psych. 142-143	Experimental Psychology I-II	4	4
COGNATE	Elective	Elective		3
GE AREA II	Soc. 103-104	Criminology*—Cultural Anthropology*	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	T/RS-Phil.	Theology—Philosophy Electives	6	3
			19	19
		SENIOR		
MAJOR	Psych. 151-Elec.	History & Systems—Elec.	3	6
COGNATE	Electives	Electives	6	3
GE AREA IV	Humanities	Electives	3	3
GE FREE	Intd.-Elec.	Interdisciplinary—Elective	3	3
			15	15

Departmental recommendations are indicated by an asterisk. TOTAL: 132 credits

†Students with strong background in Mathematics should opt for Math. 3-4 in Freshman year. A double major with Human Services may be arranged; consult the adviser.

The Department recommends Psych. 146, 147, and 150 as electives for students considering graduate study in psychology.

FAMILY STUDIES MAJOR

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Psych. 23-26	Fundamentals of Psych.—Personality Theories	3	3
COGNATE	Soc. 21	Introduction to Sociology	3	
COGNATE	H/HS 12	Phil. & Organization of Human Services		3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Psych. 144-155	Childhood Adolescence—Adulthood & Aging	3	3
MAJOR	Psych. 145-165	Abnormal Psychology—Dysfunctions in Childhood	3	3
COGNATE	Gero. 101	Introduction to Gerontology		3
COGNATE	Electives	Electives	3	3
GE AREA I	Nat. Sci.	Natural Science Electives	3	3
GE AREA III	Communications	Communication Elective		3
GE AREA V	Phil. 110	Ethics	3	
PHYS EDUC	Ph. Ed. 23-24	Physical Education	1	1
			16	19
		JUNIOR		
MAJOR	Soc. Elec.-Psych. 24	Sociology Elective—Statistics I	3	3
MAJOR	Intd. 24-Elec.	Parenting—Elective	3	3
COGNATE	H/HS 101-102	Case Management*—Theories of Counseling*	3	3
GE AREA I	Nursing 12	Family Health*		3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	T/RS 135	Theology of Love and Marriage*	3	
			15	15
		SENIOR		
MAJOR	Fam. St. 11-Elec.	Consumer Economics—Elective	3	3
COGNATE	Elective	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS†	Electives†	3	3
GE FREE	Electives	Electives	3	6
			15	15
			TOTAL:	127 credits

*Recommended Courses

N.B. Engl. 2 (Oral) and Engl. 7 (Written) are recommended as communication electives in Freshman year.

†T/RS 136, 162, or 165 recommended as electives.

PSYCH. 23 Staff
Fundamentals of Psychology 3 credits
An introduction to the science of psychology with emphasis on the nature of behavioral data, learning paradigms, and assumptions underlying the fundamental principles of development and motivational-emotional processes. Introduction to, and familiarization with, the basic sources in psychology including journals and handbooks. Course requirements include participation in a psychological experiment or equivalent.

PSYCH. 24 Dr. Dunstone
Psychological Statistics I 3 credits
Descriptive statistics, correlation, regression, sampling, estimation.

PSYCH. 25 Staff
Human Behavior 3 credits
(Prerequisite: Psych. 23) The course is designed to increase the student's understanding of Human Behavior from the theoretical and applied points of view. Course requirements include participation in a psychological experiment or equivalent. Should not be taken after Psych. 26.

PSYCH. 26 Dr. Heatherington
Theories of Personality 3 credits
(Prerequisite: Psych. 23) A survey and critical evaluation of the major theories of personality and their implications for personality assessment, psychotherapy, and research.

PSYCH. 141 Dr. Lennon
Psychological Testing 3 credits
(Prerequisites: Psych. 23 & 24) Provides a thorough grounding in principles of testing and measurement; with a detailed study of variance as related to reliability and validity of tests.

PSYCH. 142 Dr. O'Malley
Experimental Psychology: Sensation and Perception 4 credits
(Prerequisites: Psych. 23 & 24) Concerns the experimental study of sensory mechanisms and perceptual phenomena. Supervised individual experimentation. Two hours lecture. Four hours laboratory. Lab Fee: $20.00.

PSYCH. 143 Dr. Dunstone
Experimental Psychology: Conditioning and Learning 4 credits
(Prerequisites: Psych. 23 & 24) Concerns the experimental study of both classical and instrumental conditioning. Supervised animal and human experimentation. Two hours lecture. Four hours laboratory. Lab Fee: $20.00.

PSYCH. 144 Dr. Buchanan
Childhood and Early Adolescence 3 credits
Survey of psychological research dealing with the development and behavior of children from infancy to adolescence. Course will consider the physical, cognitive, and social aspects of development across age periods (prenatal, infancy, childhood, and early adolescence) with an emphasis on major developmental theories.

PSYCH. 145 Dr. Heatherington
Abnormal Psychology 3 credits
(Prerequisite: Psyc. 23) A survey of the major theories, research, and issues in the description, classification, etiology, and treatment of abnormal behavior.

PSYCH. 146 Dr. Dunstone
Psychological Statistics II 3 credits
(Prerequisite: Psych. 24) An introduction to scientific method and experimental design. Emphasis is placed on the kinds and sources of error in experimentation, methods of control and design of experiments.

PSYCH. 147 Dr. Cannon
Physiological Psychology 3-4 credits
(Prerequisite: Psych. 23) Behavior from the biological perspective; basic physiology of the brain; interaction of the brain and behavior. Lab is optional and requires permission of instructor. Three hours lecture, two hours lab. Lab Fee: $20.00.

PSYCH. 148 Dr. Baril
Social Psychology 3 credits
(Prerequisite: Psych. 23) Social determinants of behavior from a psychological perspective. Topics include affiliation, conformity, persuasion and attitude change, person perception.

PSYCH. 149 Dr. Baril
Industrial Psychology 3 credits
(Prerequisite: Psych. 23) The psychological study of people at work. Topics include personnel selection and training, motivation, leadership, the physical work environment, and consumer behavior.

PSYCH. 150 Staff
Research Methodology 3 credits
(Prerequisite: Psych. 23 & 24) Problems and issues in interpreting and designing research in the behavioral sciences. Single subject, survey, correlational and experimental research.

PSYCH. 151 Staff
History and Systems of Psychology 3 credits
(Prerequisite: Psych. 23) Historical origins of various schools of thought and current views in psychology. Philosophical as well as empirical traditions are emphasized.

PSYCH. 153 Staff
Behavior Modification 3 credits
(Prerequisite: Psych. 145) Examines current applications of learning principles in clinical and educational settings. Will survey techniques, their theoretical foundations, relevant research and case studies, and legal and ethical issues raised by their use.

PSYCH. 154 Dr. Buchanan
Cognitive Psychology 3 credits
(Prerequisite: Psych. 23) This course will consider a number of approaches to the study of human cognitive processes with an emphasis placed on the information processing model. The course of human intellectual development will be discussed from early childhood to adulthood. A variety of topics will be covered including perception, attention, memory, language, reasoning, problem solving, and creativity.

PSYCH. 155 Dr. Buchanan
Late Adolescence, Adulthood and Aging 3 credits
(Prerequisite: Psych. 23) Survey of the psychological research dealing with the age graded aspects of behavior in adulthood. Course will consider the physical, cognitive, and social aspects of the aging process from late adolescence to death. Topics to be covered include such issues as occupation selection, marriage, parenthood, middle age, retirement, and dying.

PSYCH. 160 & 161 Staff
Undergraduate Research 6 credits
(Prerequisite: Psych. 150 and permission of professor) Individual study and research on a specific problem.

SOCIOLOGY

PROF. RIELLY, *Chairman*

Courses in Sociology seek to provide both the terminal student and the prospective graduate student with a basic understanding of the forces that are part of the social processes. In addition, the courses are designed to help the student interested in the field of Social Work or Social Welfare to attain a pre-professional orientation to these fields.

Students interested in Urban Planning are advised to include Soc. 106, 111, and 114 in their planning; for Social Work, Soc. 104, 106, 107, 109 and 114; for Medical Services/Administration, Soc. 125, 126, and 127; for Personnel Relations/Administration, Soc. 115, 148 and 150.

The Department of Sociology/Criminal Justice also administers the Criminal Justice/Law Enforcement undergraduate major at the University (See p. 68), and the Gerontology Major (p. 126).

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Soc. 21-22	Principles—Social Problems	3	3
COGNATE	Psych. 23	Fundamentals of Psychology	3	
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Soc. 117-118	History of Sociological Thought I-II	3	3
MAJOR	Sociology	Electives	3	3
COGNATE	H/HS 11-Soc. Sci. Elec.	Foundations of Human Services—Elective	3	3
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Elective	3	
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Soc. 122-112	Statistics—Social Research Methods	3	3
COGNATE	Pol. Sci.	Political Science Elective	3	
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
GE FREE	Electives	Electives	3	3
			18	15
		SENIOR		
MAJOR	Soc. 191, 198, 199	Internship/Electives/Independent Study	3	3
COGNATE	Soc. Sci. Elec.	Electives	3	3
COGNATE	Hist./Pol. Sci.	History/Political Science Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE FREE	Elective—Intd.	Elective—Interdisciplinary	3	3
			15	15

TOTAL: 127 credits

In GE AREA I, the department recommends Natural Science I and 101, and/or Biology 3 or 4. In GE AREA III, the department recommends Engl. 2, Engl. 7, and CMPS 21, Programming for Social Scientists. In the COGNATE Social Science Electives, the department recommends a mix of Human Services, Law Enforcement, and Psychology electives, especially Psych 26 for students interested in social work. It should be noted that 3 additional credits are added to the FREE AREA rather than the major.

GERONTOLOGY CONCENTRATION

The degree program in Gerontology has the following objectives:

1. to understand the processes of aging; 2. to prepare for careers in agencies and institutions serving the aged, such as Area Agencies on Aging, Family Services, Long Term Care facilities, Telespond, etc.; 3. to provide a liberal gerontology education with special emphasis on the development of the whole person; 4. to provide students with academic preparation for advanced study in gerontology, social work, public administration, social welfare, and related fields.

The Scranton area is especially suited to serve as a laboratory setting for gerontology education with its high proportion of elderly citizens and its many agencies and facilities for the aged. The Gerontology major is administered by the Department of Sociology. An Advisory Board of Community leaders working in the field of Gerontology has been established to work with University officials and faculty in the areas of curriculum and internships.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Soc. 21-Gero. 101	Principles of Soc.— Intro. to Gerontology	3	3
COGNATE	Psych. 23-H/HS 12	Fundamentals of Psych.— Phil./Org. of Human Serv.	3	3
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Elective	3	
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 21	Introduction to Theology		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Gero. 102	Social/Psychological Aspects of Aging	3	
MAJOR	Gero. 105	Social Welfare and the Aged		3
MAJOR	Gerontology	Electives	3	3
COGNATE	H/HS 11-Soc. 148	Case Management— Social Psychology	3	3
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Elective	3	
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS Elective	Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Gero. 191, 198, 199	Internship/Electives/Indep. Study	3	3
COGNATE	Psych. 155	Late Adolescence, Adulthood & Aging	3	
COGNATE	Soc. 114	Minorities and Aging		3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil-T/RS Elec.	Electives	3	3
GE FREE	Elective	Elective	3	
			18	15
		SENIOR		
MAJOR	Gerontology	Electives	6	6
COGNATE	Soc. Sci. Elec.	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE FREE	Elec.-Intd.	Electives—Interdisciplinary	3	3
			15	15

TOTAL: 127 credits

The Gerontology Internship may be taken in either the junor or senior years, or both (not to exceed a maximum of six credits of internship).

In GE Area I, the department recommends Biol. 10: Fundamentals of Human Nutrition. In GE Area III, the department recommends Engl. 2 and Engl. 7. In the COGNATE as Social Science Electives, the department recommends H/HS 13, 102, 103; Psych. 25, 26, 145, 153; Sociology 22, 106, 109, 125, 127.

SOC. 21 Staff
Principles of Sociology 3 credits
Fundamental principles in the field of sociology. Stratification, ethnicity, deviance. The basic institutions of society; social change and demographic trends.

SOC. 22 Staff
Social Problems 3 credits
Application of sociological principles to major issues in contemporary society.

SOC. 104 Prof. Rielly & Dr. Rynn
Cultural Anthropology 3 credits
Cultural and social organization among primitive or preliterate societies; marriage, property, religion, magic and tribal control. Significance of the study of primitive cultures for understanding of urban, industrial civilizations.

SOC. 106 Prof. Pryle
Community Organization 3 credits
A general introduction to the field and process of community organization, both as a field of social work and as a field of human endeavor. The coordination and financing of welfare activities, methods of appraising community needs and resources, planning and the initiation of welfare services. Services of a voluntary and governmental nature, strategies of power.

SOC. 107 Prof. Pryle
Child Welfare 3 credits
Development of child welfare in the United States. Educational, health, recreational and child labor regulations. Study and treatment of children in their own homes, foster homes and institutions. Child care and protective programs on federal, state and local level.

SOC. 109 Prof. Pryle
Introduction to Social Work 3 credits
Growth of social work as a professional endeavor. The scope of social work; case work in the medical, psychiatric, family and child welfare and guidance field, community organization as exemplified in the United Fund and Planning Council, social research, social planning, social group work. Current trends in social work.

SOC. 110 Staff
Marriage and the Family 3 credits
An historical, comparative, and analytical study of marriage and family institutions. Problems of courtship, mate selection, and marriage adjustment in modern society.

SOC. 111 Prof. Pryle, Fr. Conlin
Urban Sociology 3 credits
Urban ecology and culture as the dominant form of community life in contemporary society; its characteristics, peculiarities, and problems.

SOC. 112 Prof. Rielly, Fr. Conlin
Methods of Social Research 3 credits
The logic and character of scientific and alternative means of social inquiry. Obtaining, recording, interpreting, and publishing research materials; the use and interpretation of statistical procedures.

SOC. 114 Staff
American Minority Groups 3 credits
Patterns of adjustment between ethnic and racial groups, with special attention given to the American scene. Prejudice and discrimination as opposed to the democratic ideology.

SOC. 115 Dr. Talamini
Sociology of Work and Professions 3 credits
The nature and role of contemporary professions, occupational choice, career patterns and occupational mobility; the relationship between education, occupation, profession and aspiration.

SOC. 117 Fr. Conlin
History of Sociological Thought I 3 credits
Background and development of sociology with emphasis upon the men and ideas that strongly influenced the discipline; particular emphasis on the works of Comte, Durkheim, Weber, Simmel, Pareto and Marx, and on the social context in which they originated.

SOC. 118 Fr. Conlin
History of Sociological Thought II 3 credits
An examination of major current theoretical developments in sociological theory and a critical review of theories of leading contemporary sociologists.

SOC. 119 Fr. Conlin
Crisis in Population 3 credits
A study of the basic variables of population, birth, death and migration, socio-economic and cultural variables affecting population, growth, projections and forecasts. The chief natural and social demographic theories. Population policies and practices in selected world areas.

SOC. 121 Prof. Pryle
Religion and Society 3 credits
A survey of religious systems and their interrelations with society and social institutions, with emphasis on the social consequences and determinants of religious behavior. The theories of Durkheim, Weber, Parsons, Bellah, Berger and Luckmann will be examined.

SOC. 122 Prof. Rielly, Fr. Conlin
Social Statistics 3 credits
A course in applied statistics for the sociologist and social worker. The areas treated include frequency distributions, measures of association such as linear correlations, probability, hypothesis testing, and tests of significance.

SOC. 124 Dr. Talamini
Sociology of Sport 3 credits
The role of sport in civilized societies; sport as work and recreation; women and minorities in sport; sport in education; sport and the mass media.

SOC. 125 Prof. Rielly
Sociology of the Aging 3 credits
The study of the development and group behavior of adults following maturation, and the social phenomena giving rise to and arising out of the presence of older people in the population.

SOC. 126 Prof. Rielly
Sociology of Death and Dying 3 credits
An examination of the social, sociological, psychological and philosophical dimensions of death and dying; cross-cultural perspectives; terminal illness, professionals and death; rites and rituals.

SOC. 127 Dr. Talamini
Medical Sociology 3 credits
The social dimensions of health and illness; role of physician, nurse, and patient; social organization of health services; the content of medical practice; culture and health disorders; mental health and mental illness.

H/SO 134 Dr. Feller
Introduction to Archaeology 3 credits
An introduction to the study of archaeology from anthropological and historical perspectives. Areas to be explored include survey and site recognition, excavation planning, record keeping, treatment of artifacts and above-ground archaeology.

SOC. 135 Dr. Rynn
Peoples of East Asia 3 credits
The anthropology of the East Asian culture area, focusing particularly on China and Japan. Topics include basic social institutions, world views, culture and personality, and the problem of modernization.

SOC. 148 Dr. Rynn
Social Psychology 3 credits
Study of individual behavior as affected by cultural and social stimuli. Emphasis on the analysis of human conduct in social settings.

SOC. 150 Dr. Rynn
Industrial Sociology 3 credits
Modern industrialism as social behavior. Social conditions in the rise of industrialism and their effect on the worker; collective bargaining and industrial conflict, the industrial community; social classes and the industrial order.

SOC. 191-192 Staff
Independent Study in Sociology 3 credits
Designed for advanced students who are capable of independent study. A program of planned research under the guidance of a faculty member. Registration upon approval of Chairman of the Department and instructor directing the study.

SOC. 198-199 Prof. Rielly
Internship in Social Work 3 credits
Practicums designed to broaden the educational experience of students through practical experience and work assignments with governmental and/or community agencies in the field of social work. Supervision by a faculty member and agency supervisor. In selected cases a student may receive credit for part time paid experience. In either case, approval of mentor is necessary. Limited to juniors and seniors.

Approved courses from other curricula: sociology majors may be advised to choose several courses taught in the Criminal Justice sequence—Courses subject to such approval include:

S/CJ. 103 Criminology
S/CJ. 113 Juvenile Delinquency
S/CJ. 117 Sociology of Deviance
S/CJ. 104 Victimology
S/CJ. 115 Organized Crime Patterns
S/CJ. 123 Law and Society
S/CJ. 116 Crime, Deviance & Respectability
S/CJ. 128 Penology

THEOLOGY AND RELIGIOUS STUDIES

FR. ROUSSEAU, S.J., *Chairman*

The religious dimension of human life is of such importance that it must be explored in a liberal arts curriculum. Whether one regards the history of man, his grappling with present problems, or his planning for the future, religious faith is always to play a significant role.

The Bachelor of Arts degree program in theology and religious studies requires thirty credit hours in the major field.

The General Education requirement for all students at the University of whatever religious persuasion is six credit hours in theology or religious studies courses. Additionally, they have the option of completing another six hours in either philosophy or theology/religious studies to complete the GE AREA V requirements. T/RS 186 Jewish Theological Thought and T/RS 185 The Protestant Faith are taught, respectively, by a Jewish rabbi and Protestant Minister.

All freshman students take T/RS 21, a non-denominational introductory course on the role of religious experience in human life. Beyond Freshman year, for the second required course in Theology/Religious Studies, students may select from any upper division course (course numbers in the 100's).

Departmental Courses are grouped into the following categories:

Biblical Theology (100-129)
Doctrinal Studies (130-149)
Historical Studies (150-159)
Moral Theology (160-174)
Religion and Society (175-189)

T/RS 21 Staff
Introduction to the Study of Religion 3 credits
An inquiry into the phenomena of religion as it operates in history and contemporary culture. Includes an analysis of the reasons for and forms of belief as well as the contemporary problems of belief.

T/RS 100 Prof. Steele
Inside the Old Testament 3 credits
This course is designed to introduce the student to a full range of Old Testament literature with attention to its literary form, historical content and levels of meaning. Readings from the primary sources will be supplemented by secondary readings and AV materials.

T/RS 101 Staff
Inside the New Testament 3 credits
An introductory course in New Testament. The thought world of Christianity and its Jewish background; an examination of the manner in which the Christian community preserved and applied the words of Jesus.

T/RS 102 Fr. Bergamo
Introduction to Biblical Exegesis I 3 credits
The individuals, history and literature of the Old Testament, with special emphasis on ancient Near East environment, and the relation of this literature to the biblical books.

T/RS 103 Fr. Bergamo
Introduction to Biblical Exegesis II 3 credits
An examination of the discipline of Old Testament theology. Critical and exegetical study of selected writings in the Bible, Biblical criticism.

T/RS 110 Rabbi Shoop
Ideas and Ideals of Hebrew Scripture 3 credits
Biblical teaching seen as a revolution against contemporary cultures and moralities. The Bible as process, exhibiting development and change in a world outlook, ethical ideals and ritual. The question of the "who" and "when" of biblical authorship. The Bible as a cultural force, influencing all languages, poetry, music, painting and sculpture. The "truth" of Biblical selections; differences between scientific, historic, mythical and ethical truth.

THEOLOGY/RELIGIOUS STUDIES MAJOR

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	T/RS 21-Elective	Introduction to the Study of Religion—Elective	3	3
COGNATE	Elective	Electives	3	3
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA II	Social/Behavior	Elective	3	
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy		3
GE FREE	Elective	Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	T/RS	Second Year Electives	3	3
COGNATE	Elective	Electives	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective	3	
GE AREA V	Phil. 110	Ethics		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	T/RS	Electives	6	6
COGNATE	Electives	Electives	3	3
GE AREA II	Social/Behavior	Elective	3	
GE AREA IV	Humanities	Electives	6	6
			18	15
		SENIOR		
MAJOR	T/RS	Electives	3	3
COGNATE	Electives	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Philosophy	Philosophy Electives	3	3
GE FREE	Intd.—Elective	Interdisciplinary Elective—Elective	3	3
			15	15

TOTAL: 127 credits

T/RS 111 Fr. Barone
Pauline Letters 3 credits
An introduction to the Apostle of the Gentiles, who preached Christ to the great cities of the Greco-Roman world. Archaeological discoveries relevant to Paul's mission journeys are presented through film and slides.

T/RS 112 Fr. Barone
The Gospels and Jesus 3 credits
An historical-critical study of the synoptic gospels. The historical figure of Jesus of Nazareth as perceived in the resurrection faith of the early Christian communities. Film and slide presentations of archaeological discoveries relevant to New Testament era.

T/RS 130 Dr. Steele
Ways of Prayer 3 credits
Designed for students who wish not only to learn *about* prayer but also to pray better. Focus on traditional and contemporary approaches to prayer in both Eastern and Western worlds. Opportunities to practice various methods are provided: Jesus prayer, Charismatic prayer, Ignatian (Jesuit) prayer, praying from Scripture, etc. Consent of Instructor necessary.

T/RS 131 Fr. Coccia
Faith and Reason 3 credits
The problem of faith and reason, that is, intellectual difficulties with belief and the objects of belief, reexamined in the light of contemporary epistemology. An in-depth study, taking in both the problem of truth and the problem of knowledge.

T/RS 132 Fr. Walsh
Symbolic Dimensions of Faith 3 credits
This course is designed to explore the universal symbols that have emerged from the collective experience of mankind, and which man has employed in his attempts to communicate with God, particularly in the Judaic-Christian tradition.

T/RS 133 Fr. Coccia
Christian Spirituality 3 credits
An historical, analytical, appreciative study of the fundamental principles and development of Christian ascetical theology. Traditional concepts such as faith, prayer, sin, conversion, discernment, peace, consolation, desolation, repentance and mortification are examined and evaluated.

T/RS 134 Fr. Walsh
Conversion and Reconciliation 3 credits
The biblical theology of God's call to a life of conversion and the celebration of that experience in the Sacrament of Reconciliation. A history of the various stages of the Sacrament of Penance; the renewed understanding of this sacrament as seen in the Revised Ritual of Reconciliation.

T/RS 135 Fr. Sattler
Theology of Love and Marriage 3 credits
Natural and supernatural meaning of love. The theology of vocation, the secular meaning, sign and celebration of Christian matrimony, and the implications for Christian perfection in the calling to marriage and family life.

T/RS 136 Fr. Sattler
Theology of Sexuality 3 credits
What is sexuality? sexualness? What do biology, ecology, ethology, genetics, and the many psychologies and philosophies of the human mammal have to say about being-of-a-sex? How would these interact with a Christian reflection upon faith and a belief in being alive with openness to life in the celibate, unmarried, and married states? Is there a sexual revolution? If so, how does a Christian evaluate it?

T/RS 137 Dr. von Wahlde
Ignatian Spirit 3 credits
This course will study the Society of Jesus (Jesuits). It will include a survey of the 400 year tradition of the order as well as an introduction to their spirituality as reflected in the Spiritual Exercises. Guest lecturers are a regular part of the course.

T/RS 138 Sr. Kopas
Theology of the Person 3 credits
This course studies the religious dimensions of personal existence against the background of Christian tradition and contemporary experience. In the process it develops some of the main themes of a Christian anthropology including creation, salvation and alienation.

T/RS 139 Fr. Bergamo
Theology of the Church 3 credits
An exploration of the concepts of the Christian community from their source in the Bible to the Second Vatican Council. The Church as sacrament and mystery with an emphasis on the period of Vatican II and following.

T/RS 140 Fr. Yarrish
God in Contemporary Thought 3 credits
This course is a systematic introduction to the contemporary crisis in meaning. This crisis has affected language, culture and philosophy as each deals with the idea of God. The focus is on the theologians in the Catholic and Protestant traditions who have recognized the problem of the human centered approach to understanding God.

T/RS 141 Dr. Benestad
Spiritual Classics 3 credits
A study of the autobiographies of St. Augustine and St. Teresa of Avila (The *Confessions* and *Life of Teresa of Jesus*). As an introduction to the

study of the spiritual life, John Paul II's *Sign of Contradiction* is read.

T/RS 142 Fr. Krieger
Survey of Christian Mysticism 3 credits
Through the reading and discussion of the writings of the mystics, this course considers the mystical way of knowing and the contribution of such knowledge to the life of the Church.

T/RS 143 Fr. Walsh
Myths, Dreams and Divine Revelation 3 credits
An inquiry into the theology of symbol and its relationship to Christ as the preeminent symbol of God. A survey of the images and myths produced by primitive civilizations is made in order to establish the roots of God revealing himself. These images and these symbols are then related to modern dream interpretations and its relevance to Christ and the theology of symbol.

T/RS 144 Fr. O'Shea
Introduction to Byzantine Theology 3 credits
The Byzantine theological tradition develops special emphases within the mainstream of the Christian tradition. This course introduces the student to the study of some of the specifically Byzantine contributions to the understanding of the Christian mystery.

T/RS 145 Fr. O'Shea
The Individual in the Byzantine Tradition 3 credits
Persons as the creative work of God are frequently described in the Byzantine tradition as "ikons" of God. The course explores the various faces of our relation with God; in grace, in sin, in death. It also explores the humanism of the East and provides a contemporary interpretation of personhood from a Byzantine perspective.

T/RS 146 Sr. Kopas
Jesus the Christ in Tradition and Culture 3 credits
The purpose of this course is to examine the meaning and message of Jesus Christ as understood and communicated in the faith of his followers. Special consideration will be given to symbolic dimensions and cultural aspects of Christian understanding.

T/RS 150 Prof. Osterle
Religion in America 3 credits
Religion as philosophy of life, attitude, tradition and organization, with special reference to the American scene. The history and thought of various religious groups. Some contemporary issues, such as ecumenism and cults.

T/RS 151 Fr. Rousseau
The Christian Religious Tradition 3 credits
A study of the vital growth of Christianity's life, doctrine, worship and spirituality over the centuries. Special emphasis will be placed on principal leaders, thinkers and heroes.

T/RS 153 Drs. Benestad & Nordberg
Great Books: Perspectives on Western Culture 3-6 credits
The religious, philosophical, and political writings of major thinkers of the Western tradition. The first semester includes the study of the Bible, Aristotle's *Ethics,* Plato's *Apology,* Augustine's *City of God,* and the thought of Aquinas. Emphasis is on the study of these works as they illuminate the current world. The second semester description is found under Phil. 159.

T/RS 154 Fr. Rousseau
Religion and the People of America 3 credits
An exploration of the great religious developments, persons, and questions in the life of the American people from the beginnings to the present day.

T/RS 160 Prof. Steele
Foundational Christian Ethics 3 credits
Within the Judaeo-Christian tradition, there are two models of the ethical way to live. These models are in the Old Testament priest and prophet; in the New Testament, the Pharisees and Jesus; in the modern world, Thomas Merton and Teresa of Calcutta. This course analyzes these models as an introduction to the theological ethics, the study of the relationship between religious convictions and ethical ideals.

T/RS 161 Fr. Sattler
Norms for Christian Deciding 3 credits
Is there a precisely Christian value system? Does Christian orthodoxy (true belief) provide a specific foundation for Christian moral action? How would this be different from philosophical ethics? What ought a Christian to will? How does he form his conscience? How does the Christian make new reality, repair failures, renew effort, reverse malice, redeem the world, bring it to final perfection?

T/RS 162 Dr. Benestad
Christian Ethics in the Modern World 3 credits
This course will discuss the practice of the Christian moral life in contemporary society. The Christian virtues will be distinguished and related to selected problems arising in our lives as private individuals, as members of families, as professionals and as citizens. Other topics to be treated include: evil, sin, Christian liberty, Christian perfection, relativism and humanism.

T/RS 163 Prof. Casey
The Church and Contemporary Social Issues 3 credits
Explores the religious and ethical dimensions of social issues such as prejudice and violence. The findings of related social sciences and literature are placed in the context of Christian anthropology to give the student a concrete view of their interrelationship.

T/RS 164 Dr. Benestad
Social Ethics 3 credits
This course will prepare students to recognize ethical dimensions of political, economic and social issues through the study of the following: pertinent writings of Pope Paul VI and Pope John Paul II, a classic work of political theory, and several contemporary writings on such issues as morality and foreign policy and economic justice.

T/RS 165 Fr. Gannon
Moral Theology 3 credits
This is a study of the Christian moral tradition, its validity as a lien on conscience, its evolution and permanence. Specific areas treated will include obedience to the Church, the family, sexual activity and attitudes, the "rights of truth," human rights.

T/RS 166 Dr. Benestad
John Paul II and Catholic Social Thought 3 credits
This course will explore the dialogue between the Catholic Church and modern ideologies on social and political matters. Readings include pertinent documents of the Second Vatican Council and recent papal writings, especially those of Pope John Paul II.

T/RS 175 Fr. Rousseau
Contemporary Case Studies in Theology 3 credits
By analyzing several concrete, contemporary "cases," this course will attempt to clarify the theological framework and the Christian issues involved in such situations and so to increase one's ability to look at life out of a genuinely Christian context.

T/RS 176 Rabbi Shoop
Theology of the Holocaust 3 credits
A course dealing with historical, religious and psychological elements of the Holocaust. The course will treat the writings of many of the contemporary theological thinkers in their treatment of man's inhumanity to man. The course will treat both Christian and Jewish theological responses to the Holocaust. The problem of evil in the universe will be analyzed in the framework of the Holocaust.

T/RS 177 Fr. Sattler
Theology and the Life Sciences 3 credits
Ecology, population growth, and genetic technology are among the areas of human exploration that pose new challenges to Christian thought. We may ask if God has a plan for the environment and man's interaction with it. Is man helpless before it? Is the plan open to man's arbitrary manipulation? What does Christian reflection upon divine revelation have to say about endangered species, industrial waste, population explosion, etc.?

T/RS 178 Prof. Osterle
Theology and the Global Village 3 credits
A theological reflection on world food/hunger issues as related to religious belief and action. The role of the responsible Christian and Jew in an interdependent world is explored; the implications of progress for a simplification of life style in a just world order.

T/RS 179 Prof. Osterle
Peace Theology and the Arms Race 3 credits
Examination of the religious conviction that peace cannot be based on weapons. An investigation of contending perspectives on arms and disarmament; reflection on Christian responses to war/peace and the fundamental relationship of peace education to human development.

T/RS 180 Prof. Casey
Politics: A Christian Perspective 3 credits
An inquiry into the role of the state, the Church and the individual in political life. Special attention is given to the problem of violence; the

course is set in the unique American perspective of Church-State relations.

T/RS 181 Prof. Casey
Theology and Science 3 credits
An inquiry into the theological implications of the scientific view of the human person. Special concern will be given to a study of method and interpretation in each area. Readings will be chosen from the current literature in theology, the social and physical sciences.

T/RS 182 Sr. Kopas
Religion and Psychology 3 credits
The relationship between the disciplines with emphasis on their mutual concerns but distinctive approaches to the person. Significance of Freud for religion, Jung's response to Freud, and the religious dimension of Jung are discussed. Topics such as mediation, dreams, and religious symbolism are explored.

T/RS 185 Staff
The Protestant Tradition 3 credits
This course will explore the Reformation vision of theology. It will cover the roots and principles of the Protestant way of dealing with such topics as the nature of the Church, redemption, ethics, God and Jesus.

T/RS 186 Rabbi Shoop
Jewish Theological Thought 3 credits
The nature, creeds, and institution of Judaism. The God Concept, Man and His Will, the Nature of the Good, the Destiny of Man, the Shadow of Sin.

T/RS 187 Dr. Benestad
The Supreme Court and Church-State Issues 3 credits
This course explains the reasons for the separation of Church and State in the United States and then focuses on Supreme Court cases which have arisen under the free speech and religion clauses of the First Amendment. It also explores Catholic views on Church-State relations and on the Supreme Court's use of judicial power.

INTERDISCIPLINARY COURSES

INTD. 3 (NS 1)
The Nature of Nature 3 credits
Prof. Fahey, Dept. of Physics; Dr. Fairbanks, Dept. of Philosophy
An approach to the Physical Sciences which gets away from the "hard" science mathematical approach and instead looks at the effect of science on man and his environment. A better knowledge of the impact of science on man is gained by looking at the development of science from an historical point of view.

INTD. 20
The Dynamics of World Hunger 3 credits
Taught by a team of faculty from several departments.
This course focuses on the national and international problem of hunger and the question of adequate food resources. The politics, production and economics of food are discussed. Different solutions to the food problems as practiced in different countries are evaluated from the standpoint of ethics and utility.

INTD. 24 Mrs. Lawhon/Dr. Buchanan
Parenting 3 credits
Integrating the disciplines of psychology and literature, this course is designed to increase one's capacity to be a good parent. Fiction is used as discussion source for learning about child development, family relations, and parent education.

INTD. 25 Mrs. Lawhon/Fr. Pantle
20th Century Anti-Heroes 3 credits
An inquiry into the relationships between protagonists, authors, and themes in modern German, British, and American fiction. Focus of the course will be on power struggles (man versus self, man versus father—woman versus mother, man versus environment, man and woman versus one another) and their social implications. Works by Mann, Hesse, Brecht, Hauptman, and Kafka will be examined and discussed in perspective with those by Cather, Lessing, Drabble, Oates, and Didion.

NATURAL SCIENCE 101
Science and the Human Environment 3 credits
A brief study of the effects of the technological, scientific and industrial progress on the air, land and water resources of the human environment. Problems in each of the resource areas will be discussed in some detail.

COMMUNICATION ELECTIVES FOR AREA III OF GENERAL EDUCATION PROGRAM

Elementary, Intermediate, and Advanced Languages
Computer Science 20, 21, and 25.
Education 103-104, 107
PHIL. 28 Logic
ENGL. 2 Oral Communication
ENGL. 7 Writing Center
ENGL. 113 Logical and Rhetorical Analysis
ENGL. 114 Agrumentation and Debate
ENGL. 124 Creative Writing
ENGL. 125 Strategies for Teaching Writing
ENGL. 127 Teaching Modern Grammars
COMM. 111 Advanced Composition
COMM. 150 Broadcasting
COMM. 142 Educational Television
COMM. 151 Intro. to Journalism
COMM. 152 Advanced Print Journalism
COMM. 157 Television Journalism
COMM. 141 Television Production

SCHOOL OF MANAGEMENT

DR. HENRY N. AMATO, *Dean*

GOALS AND OBJECTIVES

The primary goal of the School of Management is to prepare future leaders for business and such other sectors of society as governmental and non-profit institutions requiring managerial talent, leaders who have a broad knowledge of the methods and processes of professional management and an informed understanding of the interrelationships between the professional world and society at large. The manager is not only a decision maker, but is also the leader responsible for the implementation of decisions and the evaluation of results.

Therefore, the undergraduate program of study seeks to accomplish the following objectives:

1. **Liberal Arts:** To provide students with a broad liberal arts foundation, that their knowledge, skills, attitudes and values may have a human and social dimension as well as a professional dimension.
2. **Professional Core:** To provide students with a sound background knowledge of the theory and practice of modern management, to begin the development of skills needed for successful managerial careers, and to develop an openness to the attitudes, values and commitments that society rightly expects of professionals.
3. **Specialized Professional Interest:** To provide students with the opportunities for specialized professional work in specific discipline areas.
4. **Personal Development:** To provide students with opportunities of developing their knowledge, skills and commitment to their professions and to society by involving them in varied non-classroom endeavors such as participation with faculty on community service projects, internships and other professional extra-curricular opportunities.
5. **Community Service:** To encourage faculty and students to serve the community through research and investigation of regional management problems.

PROGRAMS OF STUDY

Four programs are available: Accounting, Economics/Finance, Management and Marketing. These programs prepare the student for a career in business or for graduate study. Except for the requirements of his major and cognate, the student in the School of Management will adhere to the same regulations as the student in the College of Arts and Sciences. Apart from minor exceptions, which require explicit approval of the Dean of the School, the student will spend his senior year in residence at the University.

PROGRAMS OF STUDY

LOWER DIVISION

The curriculum in the lower division is the same for all programs. Note that in the SOM the COGNATE area is called the BUSINESS CORE.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
BUS CORE	Econ. 11, 12	Principles of Economics I-II	3	3
GE AREA I	Math. 3, 4*	Quantitative Methods I-II	3	3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20, T/RS 21	Introduction to Philosophy, Introduction to Theology	3	3
PHYS ED	Ph. Ed. 1, 2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
BUS CORE	Acc. 1 (3), 2 (4)#	Elementary Accounting Sequence	3	3
BUS CORE	Mgt. 15, 16	Statistics for Business I-II	3	3
BUS CORE	Mgt. 9†	Legal Environment of Business	3	or 3
GE AREA I, II	Nat. Sci.*-Psych. 23*	Elective, Fund. of Psych.	3	3
GE AREA III, IV	CMPS 21*†	Intro. to Computer Programming	3	or 3
GE AREA V	Phil. 110, Elective	Ethics, Elective	3	3
PHYS ED	Ph. Ed. 23, 24	Advanced Physical Education	1	1
			16	16

*Recommended.

#Accounting majors take Acc. 1, 2: Financial Accounting I, II. Other business majors take Acc. 3, 4: Financial Accounting, Managerial Accounting.

†Accounting majors should take Mgt. 9 in the Fall and CMPS 21 in the Spring; other business majors should reverse the order.

Small Business Development Center Staff: Frank Hamilton, Business Counselor; Robert Gatelli, Business Analyst; Jerry McCormick, Director; Susan Villella, Secretary

UPPER DIVISION

In the upper division the BUSINESS CORE courses are the same but are not taken at an identical time. The courses in the majors, of course, differ.

ACCOUNTING

			Credits	
		JUNIOR	FALL	SPRING
MAJOR	Acc. 21, 23	Intermediate Accounting I-II	3	3
MAJOR	Acc. 123, 121	Federal Taxes, Auditing	3	3
BUS CORE	Mgt. 108, 116	Organization and Management, Organizational Behavior	3	3
BUS CORE	Mgt. 109, 115	Intro. to Mgt. Science, Product. and Op. Mgt.	3	3
BUS CORE	Fin. 110, Mar. 107	Corporation Finance, Managerial Marketing	3	3
GE AREA II, IV	Soc. 21*-Eng. 113*	Prin. of Soc., Logic & Rhetorical Analysis	3	3
			18	18
		SENIOR		
MAJOR	Acc. 111, Acc. El.†	Advanced Accounting, Elective	3	3
MAJOR	Acc. 113, Acc. El.	Cost Accounting, Elective	3	3
BUS CORE	Mgt. 180, Intl. El.	Policy/Planning, Intl. Bus. Elective	3	3
GE AREA IV	Humanities	Electives	3	6
GE AREA V	T/RS	Elective	3	
GE FREE	Intd., Phil. 133*	Senior Interdisciplinary Elective, Business Ethics	3	3
			18	18

*Recommended.

TOTAL: 136 credits

†Students planning to sit for the CPA exam should take Acc. 14, Law for Accountants.

ECONOMICS/FINANCE

	Dept. and No.	Descriptive Title of Course	Credits	
		JUNIOR	FALL	SPRING
MAJOR	Econ. 117, 118	Intermediate Economics I-II	3	3
BUS CORE	Mgt. 108, 116	Organization and Management, Organizational Behavior	3	3
BUS CORE	Mgt. 109, 115	Intro. to Management Science, Prod. & Op. Mgt.	3	3
BUS CORE	Fin. 110, Mar. 107	Corporation Finance, Managerial Marketing	3	3
GE AREA II, IV	Soc. 21*, Comm. 113*	Prin. of Soc., Logic and Rhetorical Analysis	3	3
			15	15
		SENIOR		
MAJOR	Econ. 120, Maj. El.	Money and Banking, Elective	3	3
MAJOR	Fin. 173, Maj. El.	Financial Management, Elective	3	3
BUS CORE	Mgt. 180, Intl. El.	Policy/Planning, Intl. Elective	3	3
GE AREA IV	Humanities	Electives	3	6
GE AREA V	T/RS, Phil. 133*	Electives	3	3
GE FREE	Intd. El.	Senior Interdisciplinary Elective	3	
			18	18

TOTAL: 130 credits

*Recommended

MANAGEMENT

			Credits	
			FALL	SPRING
		JUNIOR		
GE AREA II, MAJOR	Soc. 21*, Mgt. 140	Prin. of Soc., Personnel Management	3	3
GE AREA IV, MAJOR	Eng. 113*, Mgt. 141	Elective, Labor Relations	3	3
BUS CORE	Mgt. 108, 116	Organization and Management, Organizational Behavior	3	3
BUS CORE	Mgt. 109, 115	Intro. to Management Science, Prod. and Op. Mgt.	3	3
BUS CORE	Mar. 107, Fin. 110	Managerial Marketing, Corporation Finance	3	3
			15	15
		SENIOR		
MAJOR	Mgt. 142, Mgt. Sem.	Adv. Org. Behavior, Management Seminar	3	3
MAJOR	Major Electives	Business Electives	3	3
BUS CORE	Intl. El., Mgt. 180	International Elective, Policy/Planning	3	3
GE AREA IV	Humanities	Electives	3	6
GE AREA V	T/RS, Phil. 133*	Electives	3	3
GE FREE	Intd. El.	Senior Interdisciplinary Elective	3	
			18	18

*Recommended

TOTAL: 130 credits

MARKETING

	Dept. and No.	Descriptive Title of Course	Credits	
		JUNIOR	FALL	SPRING
GE AREA II, MAJOR	Soc. 21*, Mar. 130	Prin. of Soc., Marketing Research	3	3
GE AREA IV, MAJOR	Eng. 113*, Mar. 132	Elective, Buyer Behavior	3	3
BUS CORE	Mgt. 108, 116	Organization and Management, Organizational Behavior	3	3
BUS CORE	Mgt. 109, 115	Intro. to Management Science, Prod. and Op. Mgt.	3	3
BUS CORE	Mar. 107, Fin. 110	Managerial Marketing, Corporation Finance	3	3
*Recommended			15	15
		SENIOR		
MAJOR	Mar. 131, Mar. Sem.	Marketing Communications, Mar. Seminar	3	3
MAJOR	Major Electives	Business Electives	3	3
BUS CORE	Intl. El., Mgt. 180	International Elective, Policy/Planning	3	3
GE AREA IV	Humanities	Electives	3	6
GE AREA V	T/RS, Phil. 133*	Electives	3	3
GE FREE	Intd. El.	Senior Interdisciplinary Elective	3	
			18	18

*Recommended

TOTAL: 130 credits

Executive-in-Residence Series, 1980-1981

Counterclockwise:
Alfred Peltier, Chairman of the Board, Mack Truck
Edgar Griffiths, Chairman of the Board, & CEO, RCA
William Glavin, Executive Vice President, Xerox

ACCOUNTING

Professors Ronald Grambo, Houlihan, Katorkas, Laverdiere, McLean (Area Coordinator), Zandarski

ACC. 1 Profs. McGee, Zandarski
Financial Accounting I 3 credits
(For accounting majors) A survey of accounting principles, concepts and procedures. Includes financial statements, information processing cycle, voucher system, receivables, payables, and inventory costing methods. 3 hours lecture.

ACC. 2 Profs. McGee, Zandarski
Financial Accounting II 3 credits
(For accounting majors) (Prerequisite: Acc. 1) A study of accounting principles relevant to plant and equipment, natural resources, intangibles, payroll accounting, partnerships, and corporations. 3 hours lecture.

ACC. 3 Prof. Katorkas/Staff
Financial Accounting 3 credits
(For non-accounting majors) A survey of the topics in Acc. 1 and 2. Coverage is directed toward the reporting of financial information to interested parties. 3 hours lecture.

ACC. 4 Prof. Katorkas/Staff
Managerial Accounting 3 credits
(For non-accounting majors) (Prerequisite: Acc. 3) Accounting techniques required in compiling and interpreting selected data for decision making. Includes such areas as cash and working capital flows, profit planning, statement analysis, capital investment decisions, planning and controlling operations. 3 hours lecture.

Acc. 14 Prof. Houlihan
Law for Accountants 3 credits
(Prerequisite: Mgt. 9) A study of the law of personal property, bailments, commercial paper agency, sales, and real property. 3 hours lecture.

ACC. 21 Profs. Laverdiere, McLean
Intermediate Accounting I 3 credits
(Prerequisite: Junior standing, Acc. 2) A comprehensive study of contemporary accounting theory, concepts and procedures and their application of the asset classifications on the balance sheet. Current pronouncements of the various accounting organizations relevant to assets will be emphasized. 3 hours lecture.

ACC. 23 Profs. Laverdiere, McLean
Intermediate Accounting II 3 credits
(Prerequisite: Acc. 21) Application of contemporary accounting theory to liabilities and stockholders' equity classifications of the balance sheet. Current pronouncements of accounting organizations. 3 hours lecture.

ACC. 115 Prof. R.J. Grambo/Staff
Cost Accounting 3 credits
(Prerequisites: Junior standing, Acc. 2) Theories, techniques and procedures in cost accumulation, reporting and control including such topics as job order costs, process costs, by-products and joint-products costing, and standard cost and variance analysis. 3 hours lecture.

John P. McLean
Professor of Business Administration
Alperin Chair of Management

ACC. 117 Profs. R.J. Grambo, McLean
Advanced Accounting I 3 credits
(Prerequisite: Acc. 23) The theories and promulgated standards of accounting related to multiple business units: including purchase versus pooling theory, consolidated income, minority interest, the use of equity method for unconsolidated investments, and branch accounting. 3 hours lecture.

ACC. 121 Profs. R.J. Grambo, Zandarski
Auditing Theory 3 credits
(Prerequisite: Acc. 23) A review of generally accepted accounting principles and applicable auditing principles, standards and procedures. Auditing original records and assets. Automation and the examination of electronically prepared records. Preparation of work papers. 3 hours lecture.

ACC. 123 Profs. Houlihan, McGee, McLean
Federal Taxes 3 credits
(Prerequisite: Junior standing, Acc. 2) An introductory course covering pertinent phases of federal income taxation. Emphasis on business transactions, preparation of individual, partnership and corporate returns and finding the answers to federal tax questions. 3 hours lecture.

ACC. 125 Prof. R.J. Grambo/Staff
Advanced Managerial Accounting 3 credits
(Prerequisite: Acc. 115) Accounting techniques as control devices in business with emphasis on use of accounting data in business decisions. Topics to include budgeting and profit-planning, cost profit volume, profit analysis and direct costing. 3 hours lecture.

ACC. 126 Prof. R.J. Grambo/Staff
Advanced Accounting II 3 credits
(Prerequisite: Acc. 117) A study of advanced accounting concepts including international operations, partnerships, fiduciary and institutional accounting, special sales contracts, installment sales and consignments. 3 hours lecture.

ACC. 128 Prof. McGee/Staff
Federal Taxation of Corporations and Partnerships 3 credits
(Prerequisite: Acc. 123) An introduction to the

taxation of corporations and partnerships including analyses of the tax consequences of the formation, operation and liquidation of regular corporations, Subchapter S corporations and partnerships. 3 hours lecture.

ACC. 183 Staff
Accounting Seminar 3 credits
(Prerequisite: Acc. 23) This senior level seminar will discuss advanced topics in accounting that are of current concern. The content and emphasis will be announced by the professor offering the course. 3 hours lecture.

ECONOMICS/FINANCE

Professors Babcock, Bose, Duesing, Giunta (Area Coordinator), Ralph Grambo, Nguyen, Reavy.

ECONOMICS

ECON. 10 Prof. Babcock/Staff
Essentials of Economic Theory 3 credits
(Open to non-business majors only) The stress will be on economic theory and public policy implications. The topics will include the economic theories and policy options for stabilization of the economy; the price system as it regulates production, distribution and consumption and as it in turn is modified and influenced by private groups and government. 3 hours lecture.

ECON. 11 Staff
Principles of Economics I 3 credits
Determinants of aggregate economic activity. The main areas studied are the monetary and banking system, the composition and fluctuations of national income all as influenced by monetary and fiscal policy. 3 hours lecture.

ECON. 12 Staff
Principles of Economics II 3 credits
This course centers on the salient characteristics of the modern American economy. Operations of the price system as it regulates production, distribution, and consumption, and as it is in turn modified and influenced by private groups and government. International economics. 3 hours lecture.

ECON. 117 Prof. Giunta
Intermediate Economics I 3 credits
(Microeconomic Analysis)
(Prerequisite: Junior standing, Econ. 12) This course centers on the analysis of production and cost theories. The topics studied are pure competition, monopoly, oligopoly, monopolistic competition, factor pricing, resource allocation, and income distribution. 3 hours lecture.

A. John Giunta
Professor of Business Administration

ECON. 118 Prof. Giunta
Intermediate Economics II 3 credits
(Macroeconomic Analysis)
(Prerequisite: Junior standing, Econ. 11) Course centers on the study of national income accounting, price level fluctuations, problems of full employment, and impact of monetary and fiscal policy on income level and distribution. 3 hours lecture.

ECON. 120 Prof. Bose
Money & Banking 3 credits
(Prerequisite: Econ. 118) A survey of money, credit and prices and their effects on economic stability. Credit controls of Federal Reserve System. 3 hours lecture.

ECON. 159 Prof. Bose
Public Finance and Taxation 3 credits
(Prerequisite: Econ. 118) Government expenditures, budgets, intergovernmental fiscal relations, public debt, fiscal policy, and the principles of taxation. 3 hours lecture.

ECON. 165 Prof. Giunta/Staff
International Economics 3 credits
(Prerequisites: Econ. 11, 12) International trade theory and policy implications. The financial aspects of trade. The effects of trade on the domestic economy. Multinational enterprises and their role in the world economy. 3 hours lecture.

ECON. 181 Staff
Seminar on Contemporary Economic Problems 3 credits
(Prerequisite: Econ. 118) The content varies. This course is geared to independent scholarship by the student. 3 hours lecture.

FINANCE

FIN. 110 Profs. Chien, R.W. Grambo, Reavy
Corporation Finance 3 credits
(Prerequisite: Junior standing, Acc. 2 or 4, Mgt. 16) A comprehensive study of the financing decision within a corporation. Analysis of risk and return capital budgeting under condition of uncertainty, and financial structure. 3 hours lecture.

FIN. 160 Prof. Reavy
International Finance 3 credits
(Prerequisite: Fin. 110) The course covers international capital markets, financing problems of international corporations, exchange risk and speculation, international banking and the Eurodollar market. 3 hours lecture.

Everett Brown, Associate Professor of Business Administration

FIN. 173 Prof. R.W. Grambo
Financial Management 3 credits
(Prerequisite: Fin. 110) Advanced study of the capital budgeting process. Stochastic decision models related to financing. Integration of computer techniques in financial decision making. Cases are used throughout the course. 3 hours lecture.

FIN. 175 Prof. Reavy
Investments and Portfolio Theory 3 credits
(Prerequisite: Fin. 110) A comprehensive study of securities and markets, technical analysis, fundamental analysis, efficient market theories, and portfolio theory. 3 hours lecture.

MANAGEMENT-MARKETING

Professors Apostolidis, Babcock, Brown (Area Coordinator), Chien, DePaulo, Duesing, Gunawardane, Deborah Gougeon, Houlihan, Kakumanu, Nguyen, Poole, Reavy, Symanski, Wormuth.

MANAGEMENT

MGT. 15 Profs. D. Gougeon, Nguyen
Statistics for Business I 3 credits
(Prerequisite: Math 4) An introduction to the elements of probability theory. The major probability distributions are covered with an emphasis on business applications. Basic concepts in decision theory are also introduced. 2 hours lecture and 1 hour lab.

MGT. 16 Profs. D. Gougeon, Nguyen
Statistics for Business II 3 credits
(Prerequisite: Mgt. 5, CMPS. 21) A survey of modern statistical methods covering parameter estimation, hypothesis testing, goodness of fit test, analysis of variance, regression analysis, index numbers and time series analysis. The emphasis is on the use of these statistical methods in business. 2 hours lecture and 1 hour lab.

MGT. 9 Prof. Wormuth/Staff
Legal Environment of Business 3 credits
The nature, sources, formation and application of law. The judicial function, the court system, litigation and other methods of resolving disputes, legislation, law from judicial decisions, law by administrative agencies, regulation of business activity, antitrust law, consumer protec-

tion, environment and pollution control. 3 hours lecture.

MGT. 108 Profs. McKeage, Poole
Organization and Management 3 credits
(Prerequisite: Junior standing) The major concepts of managerial action deal with planning, organizing, directing and controlling. Knowledge of these key aspects of the management process will provide the student with a framework for decision making. 3 hours lecture.

MGT. 109 Profs. Chien, Duesing, Gunawardane
An Introduction to Management Science 3 credits
(Prerequisite: Junior standing, Mgt. 16) A survey of the quantitative techniques which are used by modern managers. Topic coverage will focus on model building, linear and non-linear programming methods and simulation. Emphasis is placed on the use and limits of these quantitative methods. 3 hours lecture.

MGT. 115 Profs. Chien, Kakumanu, Gunawardane
Production and Operations Management 3 credits
(Prerequisite: Junior standing, Mgt. 109, CMPS. 21) This course is designed to give the student a functional view of the running of an industrial concern. Topics studied will include: site selection, centralized versus decentralized operations, production and process layout, automation and materials handling, time and motion study, inventory control, quality control, process control systems, and make versus buy decision strategy. 3 hours lecture.

MGT. 116 Profs. McKeage, Poole
Organizational Behavior 3 credits
(Prerequisite: Mgt. 108) Investigates the field of organizational behavior in order to appreciate how work performance is affected by a variety of factors. Individuals, groups and organizations, as they relate to organizational behavior will be studied. 3 hours lecture.

MGT. 140 Staff
Personnel Management 3 credits
(Prerequisite: Mgt. 108) This course will describe and explain the preparation of job descriptions, demographics of labor resources, recruitment policies, interviewing techniques, hiring contracts, aptitude testing and performance evaluation, labor turnover and labor mobility, employee morale, complaints and grievances, disciplinary procedures, employee health and safety, wage and hour administration, and government regulations relating to labor. The handling of absenteeism, alcoholism, and drug addiction; and other functional duties of a personnel department will also be covered. 3 hours lecture.

MGT. 141 Prof. Babcock/Staff
Labor Relations 3 credits
(Prerequisites: Mgt. 108, Econ. 12) This course will focus on the factors in our economy contributed by human labor, the benefits which labor obtains from its efforts, the definition of what labor is and how it evolved and matures into a dynamic, vocal constituent of our current industrial society. A major part of the course will deal with labor compensation, wages and benefits, and how they are determined and negotiated. The position of unions in the current labor picture, current attitudes toward minorities in the labor force, discrimination and prejudices, will also be evaluated. 3 hours lecture.

MGT. 142 Prof. Poole/Staff
Organization Theory 3 credits
(Prerequisites: Mgt. 108, 116) Study of the forces both within and outside the organization that determine the structure and processes of an organization. Topics to be covered will include technology and size influences, conflict, boundary roles, matrix structure, political factors and sociotechnical systems. 3 hours lecture.

MGT. 150 Prof. Wormuth/Staff
Legal Concept of Business Organization 3 credits
(Prerequisite: Mgt. 9) This course will cover agency, business organizations, future interest, creditor rights, and contracts. 3 hours lecture.

MGT. 168 Staff
The Multinational Corporation 3 credits
(Prerequisite: Mgt. 108) Examination is made of multinational enterprise as global organizations, with emphasis on their effort on world economics. The purpose of the course is to provide a framework for understanding and analyzing broad international issues. 3 hours lecture.

MGT. 180 Prof. Brown/Staff
Policy and Planning 3 credits
(Prerequisites: Seniors only; Fin. 110, Mgt. 115, 116, Mar. 107) This is the capstone course for all business majors. Concepts and skills developed in the prerequisite courses are integrated and

applied to the overall management of an organization. Topics will include setting objectives, designing strategic plans, allocating resources, organizational structuring, and controlling performance. 3 hours lecture.

MGT. 182 Staff
Management Seminar 3 credits
(Prerequisite: Mgt. 108) This senior level course will discuss topics of current concern in the management field, and will be conducted in seminar fashion. Content and emphasis will vary from year to year, but will always be up-to-date. Recent appropriate subjects have been: executive development, evolutionary operation, entrepreneurship, etc. 3 hours lecture.

MARKETING

MAR. 107 Profs. Apostolidis, DePaulo
Managerial Marketing 3 credits
(Prerequisite: Junior standing, Econ. 11, 12) Managerial analysis of the marketing activities in business firms and institutions including issues of macroenvironment, consumer behavior and international markets. Emphasis on segmenting target markets and developing marketing policies, such as product introduction, promotional campaigns, channels of distribution and pricing tactics. 3 hours lecture.

MAR. 130 Profs. Apostolidis, DePaulo
Marketing Research 3 credits
(Prerequisite: Mar. 107) Study of the role of marketing information as the basis for decision making. Topics include research design, methods of gathering data, questionnaire structure, interviewing methods, and preparing the final report. Examples of various types of research problems and quantitative techniques used by marketing management are presented. 3 hours lecture.

MAR. 131 Prof. DePaulo
Marketing Communications 3 credits
(Prerequisite: Mar. 107) Personal and mass communication approaches generated by manufacturers and intermediaries or institutions toward target markets. The design of advertising campaigns to shift consumer attitudes, to secure resellers support and to inform, persuade and remind action. Development of copy, selection of media and measurement of promotion effectiveness including evaluation of sales force. 3 hours lecture.

MAR. 132 Prof. DePaulo
Buyer Behavior 3 credits
(Prerequisite: Mar. 107) Study of theories of consumer behavior. The buyer is analyzed at the individual level in terms of motivation, attitudes, etc.; at the social level in terms of influences on buying behavior from the socio-economic environment. Emphasis is placed on interdisciplinary aspects and the implications for marketing decisions. 3 hours lecture.

MAR. 134 Staff
Sales Force Management 3 credits
(Prerequisites: Mgt. 116, Mar. 107) This course is intended to develop the concepts and techniques needed to identify and analyze the various decision areas faced by a sales force manager. Topics to be covered include recruiting, selecting and training the sales force; forecasting, budgeting, and sales quotas; assigning, motivating and compensating the sales force; evaluating and supervising a sales staff. 3 hours lecture.

MAR. 135 Staff
Retailing Management 3 credits
(Prerequisite: Mar. 107, Fin. 110, Mgt. 108, 109) This course is intended to focus on the decision areas facing retail managers. Topics to be covered will include retailing structure, merchandising, location, store layout, promotion, pricing, and personnel. 3 hours lecture.

MAR. 167 Prof. Apostolidis
International Marketing 3 credits
(Prerequisite: Mar. 107) A managerial approach to international marketing with emphasis on the key variables controllable and uncontrollable by the international marketing executive. A study of the underlying factors which affect the international markets. Special emphasis will be given to multinational marketing programs. 3 hours lecture.

MAR. 185 Staff
Marketing Seminar 3 credits
(Prerequisite: Mar. 107 and instructor's approval) A capstone course to broaden the marketing theoretical and practical ability of interested students and executives. Interchangeable topics every other semester include: marketing for non-profit organizations, retailing channels of distribution, industrial marketing, societal aspects of marketing, sales management and other marketing issues. 3 hours lecture.

SAINT PIUS X SEMINARY

In cooperation with the Diocese of Scranton, the University offers a variety of academic degree programs to students training for the diocesan priesthood in the formation program at St. Pius X Seminary, Dalton, Pa. "The immediate aim of the college level formation for the candidate for the priesthood is to help him to mature as a liberally educated human person, committed to Christ and to the service of his neighbor." *(The Program of Priestly Formation)*

Bishop J. Carroll McCormick, Ordinary of the Scranton Diocese, responding to the aims and objectives of the National Conference of Catholic Bishops, entered an agreement with the University of Scranton and the diocesan-owned seminary for student-candidates to become full-time students at the University of Scranton, while maintaining residence at the Seminary. At the Dalton campus, the seminarian's academic life is complemented by programs of personal and spiritual development. Through a series of supervised ministerial experiences, the seminarian is introduced to the life of the diocesan priest.

This cooperative relationship was established on July 13, 1970. Since then, 137 graduates of the University have been accepted in graduate schools of theology in the United States and Europe. Of that number, some 63 have been ordained for service to the Dioceses of Allentown, Harrisburg, Scranton, and the Archdiocese of Washington; some 74 graduates are currently pursuing master of theology degrees, prior to ordination to the pastoral ministry.

College-seminarians matriculate as full-time students in the four colleges of the University: College of Arts and Sciences; School of Management; Dexter Hanley College; Graduate School. The programs enable the seminarians to have contact with their peers and with University professors and affords them an opportunity for a wide variety of degree programs.

Current enrollment includes students representing the Dioceses of Camden and Trenton, N.J.; Albany, N.Y.; Charleston, S.C.; Grand Rapids, Mich.; Allentown and Scranton, Pa., and the Archdiocese of Washington.

In 1976, the University established the Saint Pius X Seminary Chair of Theology. Rev. John A. Walsh, Dean of Students, occupies the "teaching" Chair in the department of Theology on a full-time basis and extends to both collegians and seminarians the opportunity for courses in theology from the pastoral perspective of a diocesan priest.

CURRICULUM REQUIREMENTS

The seminarians of Saint Pius X Seminary are undergraduate candidates for numerous theological schools. They are required to carry 15 credits in theology and 18 credits in philosophy, in addition to the University curriculum credits.

Philosophy	**Theology**
Ethics	Introduction to Theology
Ancient Philosophy	Symbolic Dimensions of Faith
Medieval Philosophy	Biblical Exegesis
Modern Philosophy	Synoptic Gospel Studies
Metaphysics	Pauline Theology

The Seminary and University jointly sponsor accredited internship programs in Social Work and Religious Education for the seminarian-candidate.

Inquiries concerning application procedures for the Seminary can be obtained by writing:

Director of Admissions
St. Pius X Seminary
Dalton, Pa. 18414

OUTSIDE THE CLASSROOM

OUTSIDE THE CLASSROOM

As any high school graduate knows, much of a student's education takes place outside the classroom. This is true also at the University level. At the University of Scranton, much of the formal academic learning process takes place off the campus in the various internship programs as well as on the campus in traditional extracurricular activities. In many instances, these activities merit and receive academic credit.

DRAMATICS

The tradition of the theatre and dramatics in Jesuit colleges goes back four hundred years. As evidenced by the recent award of the Pulitzer Prize in Drama to Jason Miller, a 1961 graduate (AB English) of the University, at Scranton this tradition thrives. With increasing frequency, students are writing and staging their own dramatic productions, often for academic credit in English and Communications, or in place of the traditional course term paper. In recent years, students have written and directed such original productions as *White Buffalo,* which dealt with the theme of student protest, and *Then Sounds the Trumpet,* a historical drama about the 1944 assassination attempt on Hitler and which merited for its student authors the National Catholic Theater Conference Medal. Students have also directed adaptations of Peter Ustinov's *Beyond* and Shaw's *St. Joan.*

Recently, first or second year students have composed a musical adaptation of Shaw's *Overruled* and a musical rock version of Shakespeare's *As You Like It,* which was then presented on Public Television. Other students have earned academic credit through summer theatre performances in the Pocono Mountain resort area or through playwriting for University productions.

Beyond these individual efforts, THE UNIVERSITY PLAYERS each year present several dramatic productions. Recent productions of the Players include *1776, Of Thee I Sing, The Time of Your Life,* John Osborne's *Look Back in Anger,* Peter Schaffer's *Black Comedy,* Tennessee Williams' *Cat on a Hot Tin Roof,* Ben Johnson's *Alchemist,* Shakespeare's *Taming of the Shrew, Henry V, and Hamlet,* Moliere's *Imaginary Invalid,* and Edward Albee's *Who's Afraid of Virginia Woolf.* Annually, undergraduate students are given the opportunity to direct some of the productions. In recent years students directed *A Thousand Clowns.* Arthur Miller's *The Crucible,* Neil Simon's *Last of the Red Hot Lovers,* Thornton Wilder's *Skin of Our Teeth,* and an original play, *The Elders.*

Jason Miller '61, AB in English, Oscar nominee for his role as Fr. Karras, S.J., in "The Exorcist," winner of the New York Drama Critics' Award, "Tony" Award, and the 1973 Pulitzer Prize in Drama for his "The Championship Season."

ATHLETICS

INTERCOLLEGIATE SPORTS

The University is a Division III member of the National Collegiate Athletic Association (NCAA), the Middle Atlantic States Collegiate Athletic Conference (MAC), and the Eastern College Athletic Conference (ECAC).

A complete program of intercollegiate men's and women's sports is directed by the Athletic Department.

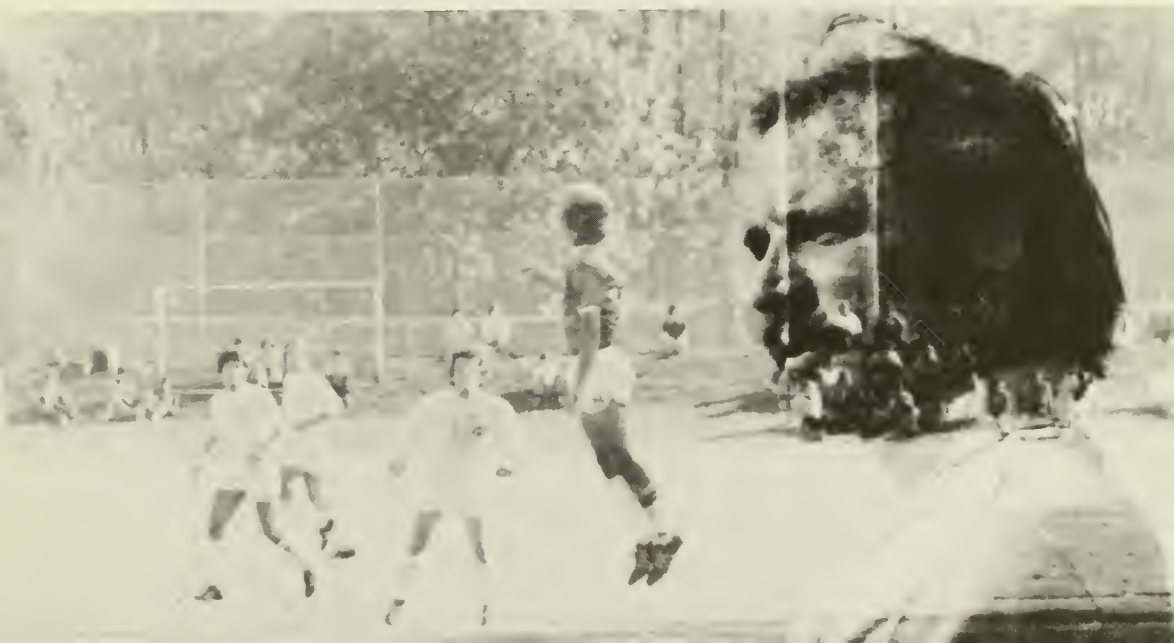
MEN'S VARSITY SPORTS	
Basketball	Cross Country
Baseball	Golf
Tennis	Soccer
Wrestling	Rifle Team

WOMEN'S VARSITY SPORTS	
Field Hockey	Softball
Tennis	Cross Country
Basketball	Rifle Team
Volleyball	

SOCCER

Each Fall, head coach Steve Klingman's varsity Royals get the athletic season off to a fine start with their annual bids for conference and national titles. In 1980, the team fell one victory short of an NCAA Division III National Championship, finishing second in the country. The team has won four of the last five Middle Atlantic Conference Championships and has been a finalist in the NCAA Regionals four straight years since 1976.

NCAA Division III Champions, 1975-76.



WOMEN'S BASKETBALL

The varsity Lady Royals, under the direction of head coach Michael Strong, rode a 26-7 record in 1980 to their fourth straight Middle Atlantic Conference Championship, their first Eastern Regional Title, and a third place finish in the National Championship Tournament. Scranton has a five-year record of 105 wins and 32 losses and is often ranked among the top ten teams in Division III.

MEN'S BASKETBALL

For the better part of a decade, under the leadership of head coach Robert Bessoir, the varsity Royals have enjoyed the winner's share of excitement in NCAA Division III competition, crowning their efforts with a national championship in 1976 and taking third place in 1977. The team has also won four Divisional Championships in the Middle Atlantic Conference over the last six years and has been selected to participate in five NCAA Mid-East Regional Tournaments since 1975.

INTRAMURALS AND PHYSICAL EDUCATION

A year-long intramural program is in operation both in the John J. Long Center and outdoors. For the additional sports available in the physical education program, see the description given in the Departmental listing earlier in this bulletin.

ROYALS' HISTORICAL SOCIETY

Recipient of the Best Club of the Year Award in 1969-70, 1975-76, and 1980-81, this association of students and faculty is devoted to enhancing the study of history outside the classroom. Additionally, the club brings diplomatic visitors to

Gov. William Scranton, former U.S. Ambassador to the United Nations, greeting Royals' Historical Society members at the U.N. in New York City.

the campus as well as travelling to consulates in New York City, Washington and to the United Nations. The club also publishes *Retrospect*, a journal of student and faculty essays in the historical field.

THE UNIVERSITY SINGERS

The Singers bring the musical voice of the University to other college campuses and high schools, as well as perform at campus events.

DEBATE

The tradition of debate in Jesuit colleges and high schools is also strong at the University of Scranton. The Noel Chabanel Council of Debate gives interested students an opportunity to compete in debate and speech events on the intercollegiate level. University of Scranton debaters travel thousands of miles each year nationwide.

PUBLICATIONS

The University offers a wide choice of journalism opportunities. The *Aquinas* is the campus newspaper and positions are available to members of all classes. The *Esprit* presents the student opinion of the campus in fine literary form. *Esprit* is the award-winning campus literary journal. History students have the opportunity to have their articles published in *Retrospect*. The yearbook, *Windhover*, is annually produced by the students.

BIOLOGY CLUB

Winner of the Club of the Year award in 1978-79, this organization is for students with a pre-medical or research interest in biology. A twice-monthly speaker program, tutorial service, volunteer program at local community hospitals, and dinner dances were among the club's activities.

THE UNIVERSITY ROYAL BANDS

The Royal Bands comprise a Concert Band, a Jazz Band, a Pep Band which plays at sports events, and a Pit Band which accompanies musical productions. The Bands draw their membership from the more than 200 band musicians who attend the University of Scranton.

OTHER CLUBS

Political Science Club
Ski Club
Photography Club
Sociology Club
Spanish Club
Hockey Club
Computer Science Club
Women's Club
Veteran's Club
India Club
Philosophy Forum
Student Education Association
Society for Advancement of Management
Royal Rifles
Psychology Club
Business Club
Schrodinger Chemical Society
International Students Club
Young Democrats
Young Republicans
Campus Bowl
Fall Revue
ROTC Commandoes
Students for Life
Phi Gamma Nu Business Sorority
Bowling Club

STUDENT SERVICES

STUDENT PERSONNEL — THE VICE-PRESIDENT in cooperation with his staff members directs the various student services, plans and coordinates all activities and services in non-instructional areas: e.g., housing, health, activities, food services, placement. THE DEAN OF STUDENTS has a special responsibility for assisting students in the Residence Halls and providing assistance in the area of student conduct.

Fr. Tom Masterson, S.J.
Director of Campus Ministries

CAMPUS MINISTRY — As a Catholic institution the University of Scranton is dedicated to promoting continued growth in personal maturity and freedom, especially as religious believers and persons dedicated to service of the human family. The specifically spiritual ministry of the entire University community is coordinated by the Office of Campus Ministries assisted by the Jesuits, other clergy, University staff members and students themselves.

Frequent daily and Sunday liturgies and other special services are conducted in the chapel and in dormitories in which the community both expresses and deepens its religious vision. Faculty and students join both in the planning and in conducting these worship services. The Sacrament of Reconciliation is celebrated both communally before important festivals and individually before daily Masses, or by request.

Spiritual counseling is available from the staff or Jesuits, especially the DORMITORY COUNSELORS. These make available their training, experience and friendship to promote greater self awareness, maturity, integration and ability to pray, as well as to identify obstacles to these and other goals.

Persons seeking a period of stillness, directed prayer or an experience of Christian community are invited to participate in frequent programs at nearby Chapman Lake. Campus Ministries also sponsors lectures and discussions on vital issues, organizes special events to heighten religious awareness, assists in services to the larger community and is responsible to act as spokesman for justice within the University. Students of non-Catholic faiths are encouraged to help plan an expansion of services to themselves.

COUNSELING CENTER — The Counseling Center serves students in their relationship with all facets of the University community. The Counseling Center is staffed by trained personnel, with over 50 years of combined college counseling experience in areas of vital concern to college-age adults. Counseling services are provided for educational, vocational, personal and spiritual needs. Counseling and testing is performed to meet a wide range of needs. Aptitude for college work, study habits, correct curricular choice, reading techniques and other personal and academic matters of concern should be taken up with Counseling Center Personnel.

The student should ask, "Now that I am in college, where do I want to go and how do I want to grow? How can I make the curriculum work to my advantage now, and best prepare me for graduate school or the world of work? How can my choice of Cognate courses and Free Elective courses enhance my education and my preparation for life after college? How do I integrate my personal and family concerns with my academic situation?" The personnel of the Counseling Center can help students answer these questions.

The Counseling Center is located in Suite 401, St. Thomas Hall. Professor Cannon, Mr. Beckish, Miss Kopcik, and Fr. Lange, S.J., are readily available to counsel any student with academic or personal questions. The Director and Assistant Director are licensed by the Commonwealth of Pennsylvania to practice clinical psychology. Interviews are on a voluntary basis and may be arranged through the Center's secretary. There is no charge for this service, which is covered by your University fee. The Counseling Center is open both day and evening and would welcome a visit from you.

Affiliate Artist Paul Spenser Adkins, Tenor, presents an "informance" during his residency sponsored by The Sears Roebuck Foundation & National Endowment for the Arts, presented by the University of Scranton, Northeastern Pennsylvania Philharmonic and Citizens for the Arts in Pennsylvania.

CONCERT AND THEATRE SERIES

The University annually presents a Concert and Theatre Series for the enrichment of the local and college community. Recent presentations have been marked both by the excellence and diversity of the performances: "Tosca," presented by the Goldovsky Grand Opera Theatre of New York; the Philadelphia Chamber Soloists; The Czechoslovakian Pantomime National Theatre of Prague; the National Shakespeare Company of New York; Ars Antiqua de Paris; the Group Motion Media Theatre of West Berlin; the Pennsylvania Ballet; the African

Heritage Dancers and Drummers of Washington, D.C.; the Lucarelli-Hillyer Ensemble; pianists Robert Silverman from Canada and Nina Sapiejewska from Warsaw; Sartre's "No Exit" by the Lyric Players of New York; Jacques Loussier Trio of Paris; the Yugoslavian Gypsy Folk group, Tzigane; The Curtis Chamber Trio of Philadelphia; The Canadian Brass of Toronto; and the Ballet Nacional De Espana.

ALUMNI ASSOCIATION — Typical of a school which is virtually youngest among the Jesuit universities of the world is the coordination of young and old members of the University community in the Alumni Society. Alumni officers speak at various student functions from freshman orientation to commencement ceremonies inducting students into the Society four years later. Together the 15,000 Alumni of the University have raised over $3,000,000 in the Annual Giving Campaign since 1955.

READING CLINIC — To assist students in correcting reading weaknesses and improving proper skills, the University's Reading Clinic under the direction of Prof. John Williams is made available. A non-credit Developmental Reading course is offered. It concentrates on such areas as comprehension, word attack, speed, critical reading and analysis, research and study techniques. There is a $75.00 fee.

OFFICE OF CAREER SERVICES — The office has designed a program of services which is available to all students and alumni. These services are maintained to advise students on career development, to assist in securing employment and to help plan further academic work following graduation. The Career Services Office conducts the corporate employment interview program for seniors, administers the accounting and federal government internship programs, and helps in locating off-campus part-time employment. During the academic year, the office presents workshops on resume/interview preparation and career planning.

Through the Director and departmental advisors, students are provided with graduate and professional school counseling in the areas of admissions, test deadlines, financial aid, and other pertinent information. Letters of recommendation for students and alumni are typed and sent to graduate and professional schools by the assistant director.

OFFICE OF CONTINUING EDUCATION — A primary agent in the University's effort to bring its resources to the people of Northeastern Pennsylvania, this office provides educational opportunities to adults who are unable to study full time or in residence. Through its Program of Lifelong Learning (PLLUS), it offers a variety of programs: 1) Assessment of Experiential Learning, a program whereby students are awarded credit toward a degree based upon competencies learned in non-collegiate settings; this includes CLEP, military courses, and credit by examination. 2) Conferences and Institutes as public service programs arranged for special groups of professionals in a specific area. 3) Certificate programs for a series of courses in a specific area; e.g., real estate, accounting, health care management, etc. 4) Non-credit courses used as refresher programs for additional background before beginning college or for professionals in upgrading skills or qualifying for a license, as well as public-service type offerings.

admissions, expenses, financial aid

ADMISSION

The Admissions Committee of the University of Scranton will make the final decision on applications for admission. In reaching this decision, the committee will consider the following:

The high school record—both the student's relative standing in class and the program followed.

The scholastic aptitude test scores.

The recommendations of teachers, guidance counselors, and the principal.

The student's character, personality, and leadership potential.

STEPS IN MAKING APPLICATION

Request for an application form and all correspondence dealing with admission to the College of Arts and Sciences or to the School of Management should be directed to:

THE DEAN OF ADMISSIONS
UNIVERSITY OF SCRANTON
SCRANTON, PENNSYLVANIA 18510
Telephone: (717) 961-7540.

A non-refundable fee of $15.00 should accompany the application.

Students should apply during the first semester of their senior year of high school. July 1 is the final date on which applications for Fall term admission will be accepted.

The first two parts of the application form should be completed and the entire form given to the registrar or principal of the high school who will record the high school grades and return the form to the University.

The Scholastic Aptitude Tests are required of all applicants. These tests should be taken during junior year and/or in November, December or January of senior year. Achievement Tests are not required. Arrange for these tests by contacting your high school guidance counselor or by writing to: The College Entrance Examination Board, Box 592, Princeton, New Jersey 08540.

A non-refundable class reservation fee of $25.00 is required of all accepted applicants. In addition, accepted resident freshmen will make a non-refundable room deposit of $50.00 upon notice from the Dean of Admissions.

REQUIRED HIGH SCHOOL PREPARATION

Students desiring to enroll in any of several undergraduate programs offered by the University must have completed a total of 16 or more high school academic units covering grades 9-12. The term "unit" means a high school course taught four or five hours weekly throughout an academic year of 36 weeks duration. Unit requirements and preferred distribution of secondary courses are given in the following table:

HIGH SCHOOL UNITS	COLLEGE PROGRAM CHOICE					
	Arts		Science or Engineering		Business, Education or Social Science	
	Req.	*Pref.*	*Req.*	*Pref.*	*Req.*	*Pref.*
English	4	4	4	4	4	4
History & Social Science	2	3	2	3	2	3
Foreign Language	2	2+	2	2+	2	2+
College Preparatory Mathematics	3	4	3	4	3	4
Science	1	2+	1	3+	1	2+
Other acceptable units	4		4		4	
TOTAL	16+		16+		16+	

Applicants without high school credit in modern languages may be accepted if they present 16 acceptable units. A single year of language in high school will not be counted as a unit to satisfy the requirements for admission.

Mathematics includes elementary, intermediate, and advanced algebra, plane and solid geometry, trigonometry, analysis, and any other college preparatory course. Applicants for science and engineering programs must include trigonometry and must have maintained an 85% average in each mathematics course.

Science includes biology, chemistry, physics, and other college preparatory courses. Pre-engineering applicants are urged to include physics in their high school preparation.

Other acceptable high school units may be chosen from any of the following:

Ancient History
Medieval History
Modern History
Civics
Economics
Problems of Democracy
Greek, Latin
Modern Foreign Language
College Preparatory Mathematics
Science
Psychology

REQUIRED OF ALL APPLICANTS

WHAT	APPLY TO WHOM	WHEN
Application Form	Dean of Admissions	End of Junior year start of senior year
High School Record	Principal (to be sent to the Dean of Admissions)	End of junior year, start of senior year.
Scholastic Aptitude Test	College Entrance Examination Board, Box 592, Princeton, New Jersey 08540	November, December, or January of senior year

Arrange to have all test scores sent to the Dean of Admissions, University of Scranton.

The University of Scranton is a Catholic, Jesuit educational institution serving men and women, and is committed to equal opportunity in employment and education for all persons without regard to race, color, creed, ancestry, sex, national origin, handicap, or age.

Advanced Placement
Academic Development Program
Transfer Students

ACCELERATION AND ADVANCED PLACEMENT

Applicants who have taken college level courses may be given advanced placement or advanced placement with credit for these courses. Students who have been accepted for admission and desire to apply for such placement must take the Advanced Placement Examination offered in May by the College Entrance Examination Board, Princeton, New Jersey 08540. Ordinarily a score of "3" or better in this examination will insure advanced placement with credit.

COLLEGE LEVEL EXAMINATION PROGRAM

Through the CLEP tests, applicants may gain college credit in most academic subjects for work done outside the classroom in jobs, military service, etc., or in non-accredited institutions. For further information contact: College Level Examination Program, Box 1824, Princeton, New Jersey 08540. Students wishing to be considered for CLEP credits should take the CLEP examinations and have the results forwarded to the Dean of Admissions.

ACADEMIC DEVELOPMENT PROGRAM

Applicants who fail to meet all of the admission requirements may be considered for a special freshman year Academic Development Program. This concentrates on English, logical thinking, reading skills, study habits, as well as work in the student's major field. Satisfactory completion of this program will insure the applicant normal sophomore standing.

TRANSFER STUDENTS

At the discretion of the Admissions Committee, students from another accredited college may be admitted provided: (1) The courses to be transferred are equivalent to courses offered at the University of Scranton; (2) the academic average of the candidate is "C plus" (2.5) or better; (3) certification of honorable dismissal is presented from the previous college. No credit will be given to courses with grades less than "C". Students transferring from other institutions shall be required to make up curricular subjects prescribed in the course which they are to follow at the University of Scranton. A minimum of 52 credits at the University of Scranton is required of transfer students for degree eligibility. Special orientation sessions are held for transfer students. It should be noted that some departments require that at least half of the credits in the student's major be taken here at the University. The respective Dean should be contacted.

STUDENT EXPENSES

ACADEMIC YEAR 1981-82

TUITION per credit	$ 97.00

ORDINARY FEES

University Fee, per semester	75.00
The University Fee is applied as follows:	
Student Center Membership Fee $35.00	
Athletic Fee 20.00	
Student Activity Fee 15.00	
Student Government Activity Fee 5.00	
Continuation Fee (in lieu of University Fee for students not in residence), per semester	5.00
Reader (Independent Study) Fee, per credit	25.00
Breakage Fees	Actual
FOR SENIORS ONLY	FOR FRESHMEN ONLY
Graduation Fee $60.00	Orientation Fee 25.00

LABORATORY FEES

Science Depts.	
Biology, Physics, CMPS labs, per course, per semester	45.00
Psychology, per course, per semester	30.00
Chemistry, per hour, per semester	20.00
Science Demonstration Fee, per course, per semester	10.00
Medical Technology Internship Fee, per semester	75.00
School of Management	
Statistics Laboratory, per semester	20.00
English/Communications Departments	
Film Screening Fee, per course, per semester	10.00
Radio Lab, TV Lab Fee, per course, per semester	25.00
Foreign Language Department	
Language Lab Fee, per course, per semester	15.00
Nursing Department	
Clinical Lab, per hour, per semester	15.00
Liability Insurance, per year (Soph., Jr., Sr. only)	12.50

SPECIAL SERVICE FEES

Late Registration Fee	15.00
Requested Change of Schedule after First Day of Classes	10.00
Change of Major Fee	10.00
Certified Transcript (per copy)	
Currently Matriculated Students	1.00
All Other Requests	2.00
Application	15.00
I.D. Photo	1.00
Scholarship Application	4.00
Parking Fee, annual	20.00
Counseling, per test	9.00
Locker Rent, per year	2.00
Reading Clinic, per course	75.00

FOR RESIDENT STUDENTS ONLY—ROOM & BOARD

Room Rent (per semester)	470.00
Food Program, 19 meal plan (per semester)	445.00
Food Program, 14 meal plan (per semester)	400.00
Health Service Fee (per semester)	10.00

Incoming resident students are required to pay a $25.00 room damage fee. The room damage fee will be paid only once by each resident student and will be refunded in full (or in part if any claims are made against the fee) upon the student's graduation or official withdrawal from school.

Fees listed for residence facilities do not cover the times of calendar vacations. Students are expected to vacate their rooms at these times.

Tuition and fees are payable in advance upon registration. Registration is to be completed BY MAIL by late August for the fall semester and by late January for the spring semester. Without exception, the Laboratory Fee must be paid in all courses having a laboratory requirement.

No student shall be permitted to receive any degree, certificate, or transcript of record until the financial account with the University has been settled.

FAMILY TUITION REDUCTION

Whenever two or more dependent children from the same family are in attendance during the same semester at the University as full-time undergraduate students, the family tuition reduction policy will apply. The amount of Tuition Credit that will be awarded each semester for each student will be calculated after other financial aid has been applied by Treasurer's Office personnel. Forms and additional information may be obtained from the Treasurer's Office.

MONTHLY PAYMENTS

The University does not accept installment payments directly, but does facilitate this arrangement through three professional agencies: Academic Management Services, 1110 Central Avenue, Pawtucket, Rhode Island 02861; EFI Fund Management Corporation, 2700 Sanders Road, Prospect Heights, Illinois 60070—and Tuition Plan Inc., Concord, New Hampshire 03301. Brochures are mailed to parents of all incoming students in May of each year.

VISA and MasterCard use is now available for tuition, fee payments. Please contact Treasurer's office for details.

REFUNDS

If a student is authorized to withdraw with honorable standing from the University for a good cause, a written request may be made for reduced charges for tuition, board and room fees. (Note should be taken that the student may not demand a refund as a matter of right.) Ordinary and special service fees are not refundable. Students withdrawing from individual courses are also eligible to receive credit on their account with the University according to the schedule given below.

SCHEDULE OF REFUNDS	CREDIT
FALL/SPRING SEMESTER	
Before the first day of classes and up to and including 9 calendar days after classes begin	100%
To and including 16 calendar days after classes begin	75%
To and including 23 calendar days after classes begin	50%
To and including 31 calendar days after classes begin	25%
Beyond 31 days after classes begin	no refund

HEALTH INSURANCE

The University offers each of its undergraduate students the opportunity to enroll in an attractive health insurance plan at the outset of each academic year. All students residing in University housing units must participate in the University's sponsored health program, unless written evidence is presented showing coverage under another health program (e.g. parents' health policy).

FINANCIAL AID

The University desires to help as many qualified students as possible to complete a college education. For this purpose the University maintains an Office of Financial Aid and all inquiries concerning such assistance should be made to the Director of Financial Aid.

PROCEDURES FOR APPLYING FOR FINANCIAL AID

1. Respond to the questions on the Admissions application relative to financial aid.
2. Complete the Financial Aid Form and forward it to the College Scholarship Service before February 15th. The University code number is 2929. Copies of the Financial Aid Form can be obtained from the Financial Aid Office.

Ordinarily to be eligible for financial aid, a student must be classified as full time, i.e. carrying a minimum of 12 credits per semester. The following financial aid programs are available:

LOANS:

The University administers the National Direct Student Loan Program. The Financial Aid Form is required of all loan applicants.

Most states operate a Guaranteed Student Loan Program in cooperation with lenders (banks, credit unions, savings and loan associations).

Applications must be secured by the borrower from the lender annually. For full-time undergraduate students, an annual maximum of $2,500 is permitted. The overall maximum for undergraduate study is $12,500.

OTHER PROGRAMS:

THE PENNSYLVANIA HIGHER EDUCATION ASSISTANCE AGENCY has been designated by the General Assembly to administer the **State Grant Program.** A graduating high school senior may be awarded from $100-$1500 per year. Interested students should consult with their high school guidance counselor for full details and eligibility requirements.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS, formerly Educational Opportunity Grants, established under the Higher Education Act of 1965 are awarded from federal funds through the college; amounts may range from $200-$2,000 per year to students from low income families. The Financial Aid Form is required for this program.

THE PELL GRANT (formerly Basic Opportunity Grant) has been established under Title IV, Part A of the Educational Amendments of 1972. Applications are available from institutions of higher education, high schools, libraries, post offices, and other locations easily accessible to students.

THE COLLEGE WORK-STUDY PROGRAM established under the Economic Opportunity Act of 1964 provides a number of jobs both on and off campus during the summer and academic year for students demonstrating a high degree of financial need. The Financial Aid Form is required of all applicants for this program.

VETERANS READJUSTMENT ACT OF 1966—Veterans should consult with their local V.A. counselor in order to establish their eligibility for participation.

U.S. ARMY ROTC SCHOLARSHIPS are available. Full details may be secured by contacting the Military Science Department.

THE BUREAU OF VOCATIONAL REHABILITATION under the Pennsylvania Department of Labor and Industry provides help to qualified students. Eligibility requirements should be discussed with a local service office.

CAMPUS EMPLOYMENT—In addition to jobs under the Federal College Work-Study Program, the University annually provides a number of jobs in various departments and administrative offices for qualified students. Students seeking campus employment must file the Financial Aid Form.

SCHOLARSHIPS:

Each year the University offers a variety of scholarships which range from full tuition Presidential Scholarships for outstanding high school seniors to partial scholarships which are granted on the basis of the student's scholastic ability and financial need. The University of Scranton participates in the College Scholarship Service and all applicants for scholarship aid must file a copy of the Financial Aid Form.

SCRANTON PREPARATORY SCHOOL SCHOLARSHIP

This four-year tuition scholarship, initiated in 1947 by the President and Board of Trustees of the University, is given annually to a graduate of the Scranton Preparatory School in honor of the following (the name of the scholarship, therefore, rotates from year to year):

THE MOST REV. RAYMOND A. LANE, D.D., SCHOLARSHIP—(1978-1982) to Daniel J. Lynott.

THE MOST REV. WILLIAM J. HAFEY, D.D., SCHOLARSHIP (1979-1983) to George A. Yavorek.

THE MOST REV. HENRY T. KLONOWSKI, D.D., SCHOLARSHIP (1980-1984) to Katherine E. O'Donnell.

THE REV. EDWARD BAXTER, S.J., SCHOLARSHIP (1981-1985) to Francis M. Lobo.

Selection of the recipient is on the basis of academic achievement, qualities of leadership, service to the Preparatory School, and recommendation of the Headmaster and Dean of Studies of the Preparatory School.

PRESIDENTIAL SCHOLARSHIPS

The *Presidential Scholarships* have been made possible by University support through unrestricted funds and, in part, by unfunded gifts made to the University by generous benefactors. These gifts are utilized as direct grants.

Noteworthy among these gifts are the significant amounts annually contributed by the Purple Club of Scranton. Since its founding in 1933, Purple Club contributions have totaled over $320,000.

Gifts made to the John C. Sawkulick Memorial Scholarship Fund have also helped provide Presidential Scholarships.

In addition, a scholarship for a pre-medical student in the amount of $200 is annually given by Dr. Joseph T. Evans, Professor of Biology. Gifts have also been made in recent years to the John J. Dempsey III Memorial Scholarship Fund.

Annually, the University names five *Presidential Scholarships* in honor of distinguished alumni, friends of the University, and citizens of the Scranton area.

The names of the *Presidential Scholarships* and the recipients for 1978-82 are:

THE FRANK FISCHETTI SCHOLARSHIP—to Elizabeth A. Faulk of Slidell, Louisiana (Slidell High School).

THE THOMAS H. HARDING, D.D.S. SCHOLARSHIP—to Michael K. Montella of Scranton, Pennsylvania (Scranton Preparatory School).

THE GEORGE JOEL SCHOLARSHIP—to Kathleen A. Knese of Drexel Hill, Pennsylvania (Archbishop Prendergast High School).

THE JOHN P. McLEAN SCHOLARSHIP—to Christopher J. Petroski of Scranton, Pennsylvania (Central High School).

THE MOST REV. JAMES C. TIMLIN, D.D. SCHOLARSHIP—to Bernadine A. Brennan of Kingston, Pennsylvania (Bishop O'Reilly High School).

The names of the *Presidential Scholarships* and the recipients for 1979-83 are:

THE MARION M. ISAACS SCHOLARSHIP—to Michael J. Carroll of Levittown, Pennsylvania (Bishop Egan High School).

THE JOSEPH A. MAHON, ESQ., SCHOLARSHIP—to Christopher M. Wahren of Clarks Summit, Pennsylvania (Abington Heights High School).

THE CLAUDE R. MARTIN SCHOLARSHIP—to Michael C. Shevlin of Carlisle, Pennsylvania (Carlisle High School).

THE JOHN A. QUINN, D.D.S., SCHOLARSHIP—to Chris E. Chernesky of Swoyersville, Pennsylvania (Wyoming West High School).

THE MONSIGNOR CONSTANTINE V. SICONOLFI SCHOLARSHIP—to Carmen J. Giunta of Scranton, Pennsylvania (Scranton Preparatory School).

The names of the *Presidential Scholarships* and the recipients for 1980-84 are:

THE IRWIN E. ALPERIN SCHOLARSHIP—to Teresa J. Pastula of Harrisburg, Pennsylvania (Bishop McDevitt High School).

THE SISTER ADRIAN BARRETT, I.H.M. SCHOLARSHIP—to Karren I. Harrison of Moosic, Pennsylvania (Riverside High School).

THE MORRIS AND MAE GELB SCHOLARSHIP—to Cindy A. Yevich of Scranton, Pennsylvania (West Scranton High School).

THE EDWARD J. LYNETT, JR., SCHOLARSHIP—to John M. Murray of Scranton, Pennsylvania (Central High School).

THE H. MYRON WETZEL SCHOLARSHIP—to Gary M. Grzywacz of Archbald, Pennsylvania (Bishop O'Hara High School).

The names of the *Presidential Scholarships* and the recipients for 1981-85 are:

THE JOHN J. BALDI SCHOLARSHIP—to Michele A. Pisano of Pittston, Pennsylvania (Pittston Area High School).

THE MRS. ANNE C. KEARNEY SCHOLARSHIP—to Mark D. Brennan of Drexel Hill, Pennsylvania (Monsignor Bonner High School).

THE REV. T. DONALD RINFRET, S.J., SCHOLARSHIP—to Erin O'Neill of Honesdale, Pennsylvania (Honesdale High School).

THE NICHOLAS D. SACCONE, D.D.S., SCHOLARSHIP—to Thomas A. Cinti of South Orange, New Jersey (Seton Hall Preparatory School).

THE THOMAS P. SHELBURNE, SR., SCHOLARSHIP—to Joseph D. Touch of Willingboro, New Jersey (Willingboro Senior High School).

PIUS X SEMINARY SCHOLARSHIP

Dr. Arthur Jordan has initiated the Rev. James Flynn '58 Memorial Scholarship for the purpose of assisting University of Scranton students at Pius X Seminary in need of financial aid.

ENDOWMENT

The University Endowment welcomes gifts of funds or property from alumni, parents of students, and other persons interested in the support of higher education.

Generally, the principal of an "endowment" is non-expendable. Income earned by investment of the endowment may be used for scholarships, awards, academic chairs, maintenance of buildings or other purposes specified by donors.

Some endowments are established by bequest through Will. Charitable Trusts and insurance programs, in more than a dozen variations, also provide a significant source of endowment funds, with the added feature of a life income for the donor. Outright gifts of highly appreciated securities or other property constitute another source of endowment funds.

Those interested in learning more about the cost and tax advantages of establishing a scholarship or other memorial, should contact:

Thomas A. McGoff
Vice President for Development
(717) 961-7661

John J. Burns, S.J.
Director of Deferred Giving
(717) 961-7661

FUNDED SCHOLARSHIPS

THE MARTHA FITCH SCHOLARSHIP FUND — In 1955 a bequest was made to the University in the Will of Miss Martha Fitch, a retired nurse and former superintendent of Thompson Hospital, Scranton. Income from this fund is used to provide scholarships for needy and deserving students.

THE MURPHY SCHOLARSHIP FUND — This Fund was established in 1957, through bequest of Miss Margaret Murphy, a retired schoolteacher and lifelong resident of Scranton. A marker has been placed on campus designating the gift as having been made by Margaret and her sister Katherine "in loving memory of our mother, father and brothers." The income of this fund is used to provide scholarships for needy and deserving students.

JAMES J. CLAUSS SCHOLARSHIP FUND — Established in 1973 by an alumnus, Class of '47, and local businessman, this fund provides investment income to aid students who require financial assistance, but do not qualify for most scholarship programs based on financial need. First consideration is given to Northeastern Pennsylvania students.

JOHN M. ROBINSON SCHOLARSHIP FUND — An initial gift in 1974 and additional yearly gifts have established a fund which is used to generate scholarship income for promising and deserving students. Scranton area residents receive first consideration. Mr. Robinson attended the University and subsequently established a business in Newark, N.J.

ROBERT I. EDELSOHN SCHOLARSHIP FUND — In 1964 a sum was bequeathed in the Estate of Robert I. Edelsohn, a Polish immigrant who became a Scranton businessman and realtor, to be held in trust by the University of Scranton. Income from the fund is used to furnish scholarships for deserving students at the University, who "without such assistance, might not be able to obtain the advantage of a college education."

BURKE FAMILY SCHOLARSHIPS — In 1966 and 1967, contributions were made to the Scholarship Endowment Fund of the University in the name of the Burke Family Foundation. In prior years, additional unrestricted gifts had been made by the Burke Family Foundation. The income from the fund is used to provide scholarships for needy and deserving students. The Burke family was originally from the Hyde Park section of Scranton. Thomas F. Burke, Class of '09, played a leadership role in founding the scholarship.

CHARLES E. MERRILL SCHOLARSHIPS — In 1969, the Charles E. Merrill Trust of New York City made a gift to the Scholarship Endowment Fund of the University. The income from this endowment is awarded for scholarship assistance to students of the Catholic faith.

BRIDGET CARNEY SCHOLARSHIP — This fund was established in 1972 by a bequest of James I. Kearney, M.D. Income from the fund, which is named to honor the memory of Dr. Kearney's mother, is used for scholarships for students, one or both of whose parents were or are parishioners of St. Ignatius Parish, Kingston, Pennsylvania.

THE JESUIT COMMUNITY SCHOLARSHIP FUND — Substantial annual gifts from the University of Scranton Jesuit Community have made possible an endowment to provide unrestricted scholarship aid to deserving students. Most awards are based on financial need and academic achievement.

REV. STEPHEN A. KOLLAR MEMORIAL SCHOLARSHIP FUND — A fund was established in 1977 in accordance with directions set forth in the Will of the late pastor of Holy Family Church, North Washington Ave. at Gibson St., in Scranton. A maximum of $500 per year is made available to each recipient. Applications must be considered in the following priority: 1) Kinship to the deceased, the Rev. Stephen Kollar; 2) members of the Holy Family Parish Congregation of Scranton for a minimum of three years prior to filing the application. In the event that there are no eligible candidates in categories (1) and (2), other needy students may be considered.

THE JOHN AND LUCILLE GUZEY SCHOLARSHIP — A gift in 1977 by Mr. and Mrs. Guzey, Scranton area philanthropists, made possible a Scholarship Fund, which is being expended in the form of partial scholarships. First consideration is given to those who apply through the West Side Scranton and the Central Scranton Boys' Clubs. Other Boys' Clubs are encouraged to propose candidates when sufficient applications are not produced by the two Scranton clubs. The University Financial Aid Office also awards Guzey Scholarships on the basis of financial need.

Another fund was established in 1978 to perpetuate Guzey scholarships. Income produced by that fund will be used to continue the program after full distribution of the initial gift.

THE FRANCIS J. KEARNEY SCHOLARSHIP FUND — A 1977 gift from a retired pharmacist, followed by a bequest in 1979, made possible this Scholarship Fund to assist deserving students in need of financial aid.

RUTH GUNSTER MEMORIAL FUND — In 1971, Joseph F. Gunster, Class of '17, established the Ruth H. Gunster Memorial Fund in loving memory of his wife. This fund, which was increased by a bequest in 1980, is invested and the income is used for scholarships given annually to students from Northeastern Pennsylvania.

JUDGE FREDERICK W. GUNSTER SCHOLARSHIPS — The Estate of Joseph F. Gunster also provided funds for this scholarship to honor the memory of his father. Awards are made on the basis of merit.

MARGARET GUNSTER SCHOLARSHIPS — Joseph F. Gunster's mother is remembered through a scholarship fund designed to assist students from low income families. This fund was also established by Mr. Gunster's bequest.

JON A. CLAUSS SCHOLARSHIP FUND — A Scholarship Endowment was established in 1980 to honor the memory of Jon A. Clauss, son of Dr. and Mrs. Thomas F. Clauss of Justus, Pa. Income from the endowed scholarship is distributed to deserving young men and women by the University's Financial Aid Office.

THE ROBERT L. McDEVITT SCHOLARSHIP — Income from a Fund established in 1977 provides scholarship assistance to qualified and deserving Hanley College students. The scholarship was established by Robert L. McDevitt, a Georgetown University classmate and long-time friend of the late Rev. Dexter L. Hanley, S.J., who served as president of the University from 1970 to 1975.

THE JETHRO SCHOLARSHIP — Funded with an endowment established by a University of Scranton faculty member, Dr. Everett R. Brown, the grant is awarded to a freshman Management, Marketing or Economics/Finance major who demonstrates that he or she has earned a significant amount of total college expenses. It is not dependent upon financial status of parents, nor high school grades. The grant may be repeated throughout the period of undergraduate study, as long as the recipient maintains a grade point average of 3.00 or better.

THE MIRIAM M. AND PATRICK F. O'HARA SCHOLARSHIP — Income from an endowment provides unrestricted scholarship grants to deserving young men and women. Selection of recipients is made by the University Financial Aid Office.

THE EDWARD T. GRONCKI SCHOLARSHIP — Established to honor the memory of a University of Scranton alumnus, the scholarships are awarded to deserving young men and women selected by the Director of Financial Aid. First consideration is given to residents of the Minooka and Greenwood sections of Northeastern Pennsylvania. The late Attorney Groncki was, at the time of his death, the leading independent specialist in mutual funds and tax shelters in the Washington, D.C. area. His support, during life, of numerous projects to aid young people, led to the creation of the scholarship by family members and close friends.

ENDOWED CHAIRS

THE PIUS X TEACHING CHAIR OF THEOLOGY — Established in 1976 by an anonymous gift, and the assignment of a matching grant from the University's Commitments to Excellence capital campaign, this chair is occupied by a priest of the Diocese of Scranton. The chairholder is nominated by the faculty of St. Pius X Seminary and approved by the faculty of the Department of Theology and Religious Studies at the University.

THE ALPERIN CHAIR IN BUSINESS ADMINISTRATION — Established by an endowment, this academic chair was set in place in 1980 through the gifts of three Scranton businessmen; Joel, Irwin and Myer Alperin, and their families.

The late Joel Mitchell Alperin was the originator and the principal sponsor of the chair and its endowment. Income from the Alperin brothers' gift is applied to the salary of a professor in the School of Management.

THE CHAIR IN JUDAIC STUDIES—Income from an endowment established by alumni and friends of the University makes it possible for the University to invite, for short visits to Scranton, Judaic scholars from Israel, or other parts of the world, for public lectures and meetings with students in classroom settings.

FUNDED AWARDS

DR. A.J. CAWLEY AWARD — In memory of Dr. A.J. Cawley of Pittston, Pa., a fund was established by a legacy from his sister, Miss Ellen Cawley. Income therefrom is used to provide an award to a Physics Major each year.

THE ROSE KELLY AWARD — A University of Scranton alumnus, Joseph Wineburgh, Ph.D., set in place an endowment to link the efforts of elementary and secondary school teachers to the achievements of college students. Each year, an outstanding student is selected by a committee appointed by the Academic Vice President. The Rose I. Kelly Award winner is asked to name a high school or elementary teacher who most influenced his or her pre-college academic preparation. Both the student and the teacher from pre-college days are honored at a campus ceremony. The student also receives a plaque and a book, selected by the student's department chairman. A copy of the same book is placed in the University Library.

Dr. Wineburgh established the program to honor an elementary teacher, Rose I. Kelly, who greatly influenced his life.

JOSEPH P. HARPER AWARD — A fund was established in 1967 to honor the memory of Joseph P. Harper, Professor of Physics. An annual award is given to a senior Physics major upon the recommendation of the Physics Department and with the approval of the Director of Financial Aid. The Department of Physics presents with the award, a citation reminding the recipient of the high scholarly ideals, exemplary life, and dedicated service represented by Professor Harper.

THE KATHRYN AND BERNARD HYLAND MEMORIAL AWARD FOR EXCELLENCE IN BIOLOGY — A gift from alumnus Bernard V. Hyland, M.D., made in loving memory of his parents, established in 1980 an endowment to perpetuate this annual award. The award is presented to a graduating senior from the Biology Department who, in the opinion of the department's faculty, has achieved distinction based on academic excellence in biology, personal integrity and concern for others.

OTHER ENDOWMENTS

THE GUNSTER LIBRARY FUND — Established by the 1980 bequest of Joseph F. Gunster, Class of '17, income from this fund provides annual support for Alumni Memorial Library.

JOHN J. LONG, S.J., FUND — Contributions to this fund were made by friends of the Very Rev. John J. Long, S.J., President of the University 1953-1963, on the occasion of his Golden Jubilee in the Society of Jesus and later as a memorial after his death in 1971. The fund is invested and the income therefrom is used for projects and programs concerned with the spiritual growth of students.

JESUIT COMMUNITY CONTRIBUTION — Total contributed services of the members of the Jesuit Community of Scranton have been approximately $3,000,000 since 1942. This gift of funds, returned to the University from payments made to Jesuits for their services, has enabled the University to offer many scholarships from its operating budget and has substantially aided the building program.

THE LOYOLA LECTURE — The Jesuit Community serving the University of Scranton has endowed a lecture program intended to bring distinguished Jesuit speakers to campus. Named in honor of St. Ignatius Loyola, founder of the Jesuit Order, this fund can also support visits by other scholars capable of assisting the University community to better appreciate the Jesuit heritage.

Dr. Vincent Ponko Jr., Academic Vice President, and Ann C. Clark, Assistant to the Academic Vice President

faculty directory

BOARD OF TRUSTEES

Joseph D. Ayd, S.J.
William J. Byron, S.J.
Richard P. Conaboy
Eugene A. Curtin, M.D.
Linda M. D'Andrea
James A. Devereux, S.J.
Charles G. Gonzalez, S.J.
James J. Haggerty, Esq.
David F. Hansen
Joseph S. Hodin
James T. Maier, S.J.
Joseph M. McDade
Laurence J. McGinley, S.J.
William C. McInnes, S.J.
Paul D. McNelis, S.J.
Mrs. Morey Myers
Seymour Nogi
Edward Popil
Carl A. Propes
Mrs. Andrew J. Sordoni, III
Most Rev. James C. Timlin, D.D.
William J. Walsh, S.J.
Edgar A. Wren, Esq.

OFFICERS OF THE UNIVERSITY CORPORATION

William J. Byron, S.J., President
Marilyn Coar, Secretary
Robert T. Ryder, Treasurer

OFFICERS OF ADMINISTRATION

President of the University (1975)
William J. Byron, S.J. (1975)
Professor of Economics (1975)
A.B., Ph.L., M.A., St. Louis University;
S.T.B., S.T.L., Woodstock College;
Ph.D., University of Maryland

Executive Vice President (1981)
Henry Butler, S.J. (1981)
B.A., M.A., Boston College
Ph.L., Weston College

Vice President for Academic Affairs (1978)
Vincent Ponko, Jr. (1978)
Professor of History (1978)
A.B., Brown University
M.A., DePaul University;
Ph.D., Loyola University of Chicago

Vice President for Business and Management (1974)
John S. Flanagan (1974)
L/Colonel, U.S. Army-Ret.
Adjunct Faculty in Business Administration (1974)
A.B., College of William and Mary;
M.S., University of Alabama

Vice President for Development (1976)
Thomas A. McGoff (1964)
B.S., University of Scranton

Vice President for Student Affairs (1976)
John R. Gavigan, D. Et U.* (1950)
A.B. University of Scranton

Dean, College of Arts and Sciences (1970)
William J. Parente (1970)
Professor of Political Science (1973)
A.B., Xavier University; Ph.D., Georgetown University

Dean, Hanley College (1963)
Charles J. Buckley, D. Et U.* (1947)
Associate Professor of Business Administration (1968)
B.S., University of Scranton;
M.B.A., New York University

Dean, Graduate School (1969)
Harry B. Strickland (1963)
Associate Professor of Business Administration (1968); B.S. St. Vincent's College; M.L., Ph.D., University of Pittsburgh

Dean, School of Management (1977)
Henry N. Amato (1977)
B.S., Southeastern Louisiana University;
M.S., Southwestern Louisiana University;
Ph.D., Tulane University

*The Pro Deo et Universitate Award for Twenty Years or more of Service to the University.

Dean of Admissions (1981)
Bernard R. McIlhenny, S.J., D. Et U.* (1958)
Director of Admissions (1966)
A.B., M.A., Loyola University, Chicago;
S.T.B., Woodstock College

Director of Campus Ministries (1976)
Thomas D. Masterson, S.J. (1976)
Assistant Professor of History (1976)
A.B., M.A., Fordham University;
Ph.L., S.T.B., S.T.L., Woodstock College;
M.A., Ph.D., Georgetown University

Director of Alumni Memorial Library (1979)
Kenneth J. Oberembt (1979)
B.A., St. John's University;
M.A., University of Illinois;
M.S., Columbia University;
Ph.D., University of Iowa

Treasurer (1974)/Comptroller (1949)
Robert T. Ryder, D. Et U.* (1946)
Adjunct Faculty in Accounting (1963)
B.S., M.B.A., University of Scranton

PROFESSIONAL STAFF AND SERVICES

George A. Aschenbrenner, S.J.
Associate Campus Minister
and Director, Adult
Spiritual Exercises Program (1979)
B.S., St. Joseph's University
Ph.L., Fordham University
S.T.L., Boston College

William B. Bauer (1978)
Grants Officer (1978)
B.S., Wilkes College;
M.S., Marywood College

Elizabeth A. Bour (1979)
Programmer/Analyst (1979)
A.B., Vassar College

Arthur J. Bugh (1978)
Assistant to Dean, Graduate School (1978)
B.S., United States Military Academy;
M.S., University of Illinois
M.B.A., University of Scranton

Kenneth S. Buntz (1979)
Sports Information Director (1979)
A.A., Keystone Jr. College
B.A., University of Scranton

Robert J. Burke (1961)
Director of Personnel Services (1974)
B.S., M.S., University of Scranton

John J. Burns, S.J. (1976)
Director of Deferred Giving (1979)
B.S., St. Joseph's College
S.T.B., Woodstock College
Ph.L., M.A., St. Louis University

Rosemary C. Butler (1964)
Assistant to Dean,
Dexter Hanley College (1979)
B.S., Marywood College

Joseph M. Cannon, D. Et U.* (1959)
Director of the Counseling Center (1968)
Professor of Education (1974)
B.S., University of Scranton;
M.Ed., Pennsylvania State University;
Licensed Psychologist (1973)

John L. Ciani, S.J. (1981)
Editor, *The Scranton Journal*
B.A., Brown University;
M.S., Northwestern University

Ann C. Clark (1978)
Assistant to Academic Vice President (1979)
B.M., Marywood College;
M.A., Northeast Missouri State University

Marilyn Coar, D. Et U.* (1948)
Executive Assistant to the President (1971)
A.B., Rosemont College

Ronnie Davidson (1980)
Director of Continuing Education (1980)
B.S., M.S., University of Scranton
Certified Rehabilitation Counselor

Stephen A. Dembrosky (1980)
Director of Security/Safety (1981)

Jerome P. DeSanto (1979)
Systems and Programming Manager (1979)
B.S., University of Scranton

Paul H. Dyson (1981)
Admissions Counselor (1981)
B.S., University of Scranton

Doris M. Edsell, D. Et U.* (1960)
Data Processing Supervisor (1975)

Thomas J. Finnerty (1978)
Director of Alumni Relations (1978)
B.S., University of Scranton;
M.B.A., University of Scranton

Gloria Gavin (1972)
Nurse
R.N., Mercy Hospital, Scranton, Pa.

William Gilroy (1980)
Director, News Bureau (1980)
B.S., University of Scranton

Elizabeth R. Hogan (1981)
Admissions Counselor (1981)
B.S., University of Scranton

Anne M. Hoskins, D. Et U.* (1948)
Assistant to Vice President,
Student Personnel (1979)

Mary Hyland, D. Et U.* (1951)
Assistant Registrar for Graduate
School (1961)

Walter J. Kanavy (1974)
Director of Computer Center (1974)
A.B., M.B.A., University of Scranton

Louis C. Kleff, S.J., D. Et U.* (1953)
Director of Physical Facilities
and Plant Development (1974)
A.B., M.A., Woodstock College

Kathleen R. Kopcik (1974)
Counselor (1974)
A.B., Marywood College;
M.S., University of Scranton

George L. Krieger, S.J.
Associate Campus Minister,
Director, Student Retreat Program;
Adjunct Faculty in Theology
and Fine Arts (1979)
A.B., St. Mary's Seminary
S.T.B., Woodstock College
M.A., St. Louis University
S.T.M., Regis College
M.F.A., Catholic University

Martin L. Langan (1974)
Director of Central Services (1975)
B.S., University of Scranton;
M.B.A., University of Scranton

John W. Lange, S.J. (1964-66; 1974)
Counselor (1975)
A.B., Bellarmine College;
S.T.B., Woodstock College
M.S., University of Scranton

Zim E. Lawhon (1964)
Colonel, U.S. Army-Ret.
Professor of Military Science (1964)
Registrar (1970)
A.B., M.S., Princeton University

Steven Lawrence (1980)
Counselor, Career Services (1980)
B.S., M.S., University of Scranton

Gary Lippi (1980)
Technical Director of Theater (1980)
B.F.A., Ithaca College

Mariellen McCormick (1980)
Admissions Counselor (1980)
B.S., University of Scranton

John F. McNamara (1975)
Assistant Comptroller (1975)
B.S., University of Scranton

Albert M. Menichello, D. Et U.* (1954)
Chemistry Laboratory Supervisor (1977)
B.S., University of Scranton

Vincent Merkel (1978)
Programmer/Analyst (1978)
B.S., University of Scranton

Edward J. Miller (1970)
Director of Career Services (1974)
B.S., M.A., University of Scranton

Grace U. Miller (1969)
Assistant to Dean,
School of Management (1980)

Lawrence J. Morton (1969)
Dean of Students (1974)
A.B., St. Bonaventure University;
M.S., Syracuse University;
M.S., University of Scranton

Alice Murphy (1958)
Assistant to Dean,
College of Arts and Sciences (1976)

Frank Orlando (1976)
Assistant Registrar (1976)
B.S., Wilkes College;
M.B.A., University of Scranton

Constance Orr (1979)
Programmer/Analyst (1980)
B.S., University of Scranton

G. Donald Pantle, S.J.
Associate Campus Minister (1980)
B.A., Bellarmine College;
M.A., Middlebury College

Frank D. Parker (1969)
Assistant Director of
Computer Center (1969)
B.S., University of Scranton

Mary Ann Pelczar (1978)
Admissions Counselor (1978)
B.A., University of Notre Dame

Karen Pennington (1980)
Associate Dean of Students (1980)
B.A., University of Scranton
M.E., Gannon University

J. Frank Reddington, M.D., D. Et U.* (1940)
College Physician (1940)
A.B., Holy Cross College;
M.D., Georgetown University

Mirtha M. Rospigliosi (1971)
Assistant Director of Financial Aid (1979)

Thomas A. Santucci (1976)
Electronic Data Processing
Coordinator (1976)

Betty J. Scholla, D. Et U.* (1959)
Manager Annual Fund/Development Records (1978)

Mary Ann Seese (1980)
Assistant Chemical Laboratory Supervisor (1980)
B.S., University of Scranton

Frank W. Shutkufski (1966)
Superintendent of Buildings and Grounds (1969)

Mary Spellman, D. Et U.* (1960)
Assistant to Director, Career Services (1980)

Rosemary Sylvester (1976)
Assistant Director
Personnel Services (1980)

John Tabor (1978)
Senior Programmer/Analyst (1979)
B.S., University of Scranton

Joseph M. Tierney (1981)
Director of Financial Aid (1981)
A.B., University of Scranton

William N. Tome, S.J.
Associate Director of Campus Ministries (1980);
Adjunct Faculty in Philosophy
B.A., M.A., St. Louis University
LL.D., Georgetown University

Gary N. Wodder (1974)
Director of Athletics (1974)
Assistant Professor, Chairman, Department of Physical Education (1974)
B.S., M.S., Ph.D., Northwestern University

Gary S. Zampano (1974)
Purchasing Agent/Management Analyst (1975)
B.S., University of Scranton;
M.B.A., University of Scranton

FACULTY

PROFESSORS EMERITI

Umbay H. Burti, LL.D.,
D. Et U.* (1935-1980)
Department of Chemistry

Stanley L. Chickson, M.A.
(1958-1979)
Department of Mathematics

Francis J. Gallagher, S.J., M.A., S.T.L.,
(1956-1968)
Department of History

Richard F. Grady, S.J., Ph.D., L.H.D.,
D. Et U.* (1942-1970)
Department of English

Helen P. Kelley, M.S.,
D. Et U.* (1959-1980)
Assistant Librarian

Antanas Kucas, Ph.D.,
D. Et U.* (1947-1967)
Department of Modern Languages

Stephen P. Ryan, Ph.D.,
D. Et U.* (1960-1981)
Department of English

Angelina T. Scardamaglia, M.S.,
D. Et U.* (1947-1978)
Assistant Librarian

Thomas G. Sheehan, M.A.,
D. Et U.* (1947-1967)
Department of Business Administration

Leonard N. Wolf, Ph.D., D.Sc.,
D. Et U.* (1937-1974)
Department of Biology

PROFESSORS

Barry R. Anderson (1974)
Associate Professor of Biology (1980)
B.S., State University of New York at Fredonia; M.S., Ph.D., Lehigh University

Panos Apostolidis (1977)
Associate Professor of Business Administration (1977)
B.B.A., University of Athens;
M.B.A., University of Houston;
Ph.D., University of Arkansas

Martin D. Appleton, D. Et U.* (1955)
Professor of Chemistry (1964)
B.S., University of Scranton; M.S., Ph.D., Pennsylvania State University

George V. Babcock (1963)
Associate Professor of Economics (1974)
A.B., M.A., Ph.L., Boston College;
M.B.A., New York University

Mary Ann Bahruth (1980)
Assistant Professor of Mathematics/Computer Science (1980)
B.A., State University College at New Paltz;
M.A., SUNY-Binghamton

Harold W. Baillie (1978)
Assistant Professor of Philosophy (1978)
A.B., Yale University;
M.A., Ph.D., Boston College

Thomas E. Baker (1975)
Assistant Professor of Sociology (1975)
B.S., M.S., Virginia Commonwealth University

Galen L. Baril (1975)
Assistant Professor of Psychology (1977)
B.A., University of Nevada;
Ph.D., University of Maine

Carl P. Barone (1970)
Professor of Education (1978)
B.A., M.A., Colorado State College;
M.A., University of Wisconsin;
Ph.D., Ohio University

Edward F. Bartley, D. Et U.* (1938)
Professor of Mathematics (1968)
A.B., University of Scranton;
M.A., Columbia University

John J. Bartosh (1981)
Major, U.S. Army
Assistant Professor of Military Science (1981)
B.S., University of Scranton
M.S., University of Bridgeport
M.S., Marywood College

Thomas N. Beckish (1964)
Assistant Professor of Psychology (1967)
Assistant Director of Counseling Center (1964)
B.S., M.S., University of Scranton
Certified Psychologist

John A. Beidler (1964)
Professor of Mathematics/Computer Science (1976)
Chairman, Department of Mathematics/Computer Science (1980)
A.B., King's College; M.A., Lehigh University; Ph.D., Pennsylvania State University

Paul R. Beining, S.J. (1949-51; 1967)
Professor of Biology (1974)
B.S., Ph.L., Spring Hill College
S.T.L., Woodstock College; M.S., Ph.D., The Catholic University of America

J. Brian Benestad (1976)
Assistant Professor of Political Theory and Social Ethics (1978)
A.B., Assumption College;
S.T.L., Gregorian University;
Ph.D., Boston College

Robert M. Bessoir (1968)
Associate Professor of Physical Education (1973);
Basketball Coach (1972);
B.S., University of Scranton;
M.S., East Stroudsburg State College

Gerald Biberman (1981)
Assistant Professor of Business Administration (1981)
B.A., M.A., Ph.D., Temple University

Peter J. Blazes (1979)
Lt. Colonel, U.S. Army
Professor of Military Science (1979)
B.A., Pennsylvania Military College;
Ed.M., Boston University

Mrigen Bose (1968)
Associate Professor of Business Administration (1977)
B.S., Patna University; M.A. (Comm.)
M.A. (Econ.), University of Calcutta;
M.S., University of Kentucky;
Ph.D., University of Utah

Richard J. Bourcier (1968)
Associate Professor of Foreign Languages (1973);
A.B., Assumption College;
M.A., Laval University

Everett R. Brown (1975)
Associate Professor of Business Administration (1979)
B.S., M.E., Stevens Institute of Technology;
M.B.A., Ed.D., Temple University
Registered Professional Engineer in Pennsylvania

James P. Buchanan (1977)
Associate Professor of Psychology (1981)
B.A., The Johns Hopkins University;
M.A., Ph.D., University of California; Los Angeles

Michael C. Cann (1975)
Associate Professor of Chemistry (1978)
B.A., Marist College;
M.S., Ph.D., State University of New York at Stony Brook

J. Timothy Cannon (1981)
Assistant Professor of Psychology (1981)
B.S., University of Scranton;
Ph.D., University of Maine

Edward J. Capestany (1968)
Professor of Philosophy (1974)
B.S., M.A., University of Comillas, Spain;
Ph.D., University of Ottawa

Michael D. Carey (1978)
Assistant Professor of Biology (1978)
B.A., Wittenberg University;
M.A., Ph.D., Indiana University

Ellen M. Casey (1969)
Professor of English (1981)
B.S., Loyola University, Chicago;
M.A., University of Iowa;
Ph.D., University of Wisconsin

*The Pro Deo et Universitate Award for Twenty Years or more of Service to the University.

Stephen J. Casey (1969)
Associate Professor of Theology (1981)
A.B., Iona College;
M.A., Marquette University

Michael H. Cassetori (1980)
Captain, U.S. Army
Assistant Professor of Military Science (1980)
B.S., Bloomsburg State College

Raymond W. Champagne, Jr. (1967)
Professor of History (1981)
A.B., Providence College;
M.S., Duke University;
Ph.D., Loyola University, Chicago

Leonard Champney (1979)
Assistant Professor of Political Science (1979)
B.S., University of Texas, El Paso;
Ph.D., Rutgers University

Ying I. Chien (1979)
Associate Professor of Business Administration (1979)
B.S., National Taiwan University;
M.S., University of Manitoba;
Ph.D., University of Kentucky

Frank A. Cimini, D. Et U.* (1941)†
Professor of Foreign Languages (1972)
A.B., University of Scranton;
M.A., Fordham University

Joseph F. Cimini (1981)
Assistant Professor of Sociology/Criminal Justice (1980)
B.A., University of Scranton;
J.D., Columbus School of Law, Catholic University of America

Robert L. Clarke (1978)
Assistant Professor of Education (1978)
B.A., King's College;
M.A., Seton Hall University;
Ed.D., University of Pennsylvania

Orestes P. Coccia, S.J. (1975)
Assistant Professor of Theology (1975)
A.B., Fordham University;
Th.B., Regis College, Toronto;
Ph.D., University of Strasbourg

James J. Conlin, S.J. (1967)
Professor of Sociology (1970)
A.B., Ph.L., M.A., Ph.D., St. Louis University;
S.T.L., Woodstock College

Willis M. Conover (1978)
Assistant Professor of Education (1978)
B.A., B.S., Pennsylvania State University;
M.S., Ed.D., Montana State University

James J. Cunningham (1968)
Associate Professor of Education (1971)
A.B., King's College; Ed.M., Ed.D., Rutgers University; Certified Psychologist

Francis H. Curtis (1966)
Associate Professor of Education (1980);
B.S., M.Ed., Pennsylvania State University

Thomas W. Decker (1977)
Assistant Professor of Human Resources (1977)
B.A., Dickinson College;
M.Ed., University of Virginia;
Ph.D., Ohio State University;
Licensed Psychologist

Michael D. DeMichele (1967)
Professor of History (1974); Chairman, Department of History/Political Science (1976; 1979)
B.S., University of Scranton;
M.A., Ph.D., Pennsylvania State University

Vito DelVecchio (1969)
Professor of Biology (1977)
Chairman, Department of Biology (1981)
B.A., University of Scranton;
M.S., St. John's University;
Ph.D., Hahnemann Medical College Graduate School

Peter J. DePaulo (1980)
Assistant Professor of Business Administration (1980)
B.A., Adelphi University;
M.A., Ph.D., Bryn Mawr College

Philip E. Devine (1979)
Assistant Professor of Philosophy (1979)
B.A., Yale University;
Ph.D., University of California, Berkeley

Anthony J. DiStefano (1968)
Associate Professor of Physics (1977)
B.E.E., Brooklyn Polytechnic Institute;
M.A., Columbia University;
Ph.D., Stevens Institute of Technology

Joseph C. Dougherty (1967)
Professor of Political Science (1967)
A.B., St. Charles College;
M.A., Ph.D., Georgetown University

Joseph H. Dreisbach (1978)
Assistant Professor of Chemistry (1978)
B.A., LaSalle College;
M.S., Ph.D., Lehigh University

Erick C. Duesing (1978)
Assistant Professor of Business Administration (1978)
A.B., M.A., University of Missouri
Ph.D., University of North Carolina, Chapel Hill

†Under special arrangements; actively teaching 1981-1982.

John J. Dunstone (1966)
Professor of Psychology (1974)
B.S., Pennsylvania State University;
M.S., Ph.D., University of Massachusetts

John L. Earl, III (1964)
Professor of History (1972)
B.S., M.A., Villanova University;
Ph.D., Georgetown University

Gary E. Eichelsdorfer (1965)
Associate Professor of Mathematics (1979)
A.B., Gannon College;
M.A., University of Detroit

Joseph T. Evans, D. Et U.* (1953)
Professor of Biology (1965)
B.S., University of Scranton;
M.S., Ph.D., The Catholic University of America

Paul F. Fahey, Jr. (1968)
Professor of Physics (1978)
B.S., University of Scranton;
M.S., Ph.D., University of Virginia

Matthew J. Fairbanks, D. Et U.* (1960)
Professor of Philosophy (1970)
B.S., M.A., Loyola University, Chicago;
Ph.D., Notre Dame University

Richard P. Fanning (1981)
Assistant Professor of Math/Computer Science (1981)
B.S., City University of New York;
M.A., State University of New York

Matthew C. Farrel (1967)
Professor of Education (1976)
A.B., M.S., University of Scranton;
Ph.D., Fordham University

John Quentin Feller (1969)
Professor of History (1976)
A.B., Loyola College; M.A., Ph.D., The Catholic University of America

David O. Friedrichs (1977)
Assistant Professor of Sociology (1977)
A.B., University College of New York;
M.A., New York University

Joseph A. Fusaro (1974)
Associate Professor of Education (1978)
B.A., Rider College; M.Ed., University of Vermont; Ed.D., State University of New York at Albany

Edward Gannon, S.J. (1964)†
University Professor (1980)
Professor of Philosophy (1964)
Editor, *Best Sellers* (1975);
A.B., Georgetown University;
M.A., Fordham University;
Ph.L., S.T.L., Woodstock College;
Ph.D., University of Louvain

Rosellen M. Garrett (1980)
Associate Professor of Nursing (1981)
Chairperson, Bachelor of Science in Nursing Program (1980)
B.S. College Misericordia
M.S., University of Maryland
Ph.D., Medical College of Pennsylvania

Thomas M. Garrett, D. Et U.* (1960)
Professor of Philosophy (1970)
A.B., M.A., Ph.L., Gonzaga University;
S.T.L., Weston College;
Ph.D., Gregorian University, Rome

Thomas W. Gerrity (1976)
Assistant Professor of Education (1976)
B.S., University of Pennsylvania;
M.S., University of Scranton;
Ed.D., Columbia University

A. John Giunta, D. Et U.* (1960)
Professor of Business Administration (1967)
B.S., Harpur College;
M.S., Ph.D., Syracuse University

Deborah J. Gougeon (1979)
Instructor in Business Administration (1979)
B.S., M.S., University of Scranton;
Ph.D., Walden University

Leonard G. Gougeon (1974)
Associate Professor of English (1978)
B.A., St. Mary's University, Halifax;
M.A., Ph.D., University of Massachusetts

Ralph W. Grambo, Jr. (1973)
Associate Professor of Business Administration (1978)
B.S., University of Scranton;
M.B.A., Ph.D., University of Pennsylvania

Ronald J. Grambo (1976-77; 1980)
Assistant Professor of Business Administration (1980)
B.S., M.B.A., University of Scranton
Cand. Ph.D., Pennsylvania State University

Gamini D. Gunawardane (1980)
Associate Professor of Business Administration (1980)
B.S., University of Ceylon;
M.B.A., Ph.D., University of Chicago

Steven R. Hager (1981)
Assistant Professor of Biology (1981)
B.A., St. Olaf College;
M.S., Ph.D., University of Wisconsin

†Under special arrangements; actively teaching 1981-1982.

Joseph M. Hamernick, S.J. (1967)
Assistant Professor of English and Speech (1970)
B.S., St. Joseph's College;
S.T.B., Woodstock College;
M.A., The Catholic University of America

Maurice I. Hart, Jr. (1963)
Professor of Chemistry (1971)
A.B., Maryknoll College;
M.S., Ph.D., Fordham University

Laurie Heatherington (1981)
Assistant Professor of Psychology (1981)
B.A., Miami University;
M.A., Cand., Ph.D., University of Connecticut

Dennis M. Higgins (1981)
Instructor in Math/Computer Science (1981)
B.A., Northwestern University;
M.A., SUNY-Binghamton

John M. Hill (1981)
Assistant Professor of English (1981)
B.A., Central College;
M.A., University of Illinois;
M.F.A., University of Iowa;
Cand. Ph.D., University of Illinois

William B. Hill, S.J. (1946-47; 1969)†
Professor of English (1969)
A.B., Georgetown University;
Ph.L., Woodstock College;
S.T.L., Weston College;
M.A., Ph.D., Fordham University

Frank X.J. Homer (1968)
Associate Professor of History (1976)
A.B., University of Scranton;
M.A., Ph.D., University of Virginia

John S. Hopkins (1967)
Assistant Professor of Physical Education (1970)
B.S., East Stroudsburg State College;
M.S., University of Massachusetts

Daniel J. Houlihan, D. Et U.* (1947)
Professor of Business Administration (1969)
B.S., University of Scranton;
M.S., Columbia University;
J.D., Temple University

Robert F. Hueston (1968)
Associate Professor of History (1976)
A.B., College of the Holy Cross;
M.A., Ph.D., University of Notre Dame

Riaz Hussain (1967)
Associate Professor of Physics (1974)
B.S., Forman College, Pakistan;
M.S., University of Panjab, Pakistan;
M.B.A., University of Scranton;
Ph.D., Johns Hopkins University

Christine Herrick Hutt (1977)
Assistant Professor of Education (1977)
B.A., M.Ed., Pennsylvania State University;
Ph.D., University of Pittsburgh

Edward A. Jarvis, S.J. (1956)
Professor of Philosophy (1974)
A.B., M.A., Ph.L., S.T.L., Woodstock College;
Ph.D., University of Ottawa

Bernard J. Johns (1961)
Associate Professor of Mathematics (1979)
A.B., Wilkes College;
M.A., Bucknell University

Anne D. Jones (1975)
Assistant Professor in Art (1975)
B.S., Indiana State College;
M.A., Columbia University

Francis X. Jordan (1966)
Associate Professor of English (1976)
A.B., M.A., University of Scranton;
Ph.D., St. Louis University

John R. Kalafut (1965)
Professor of Physics (1974)
Chairman, Department of Physics (1976; 1979)
B.S., University of Scranton;
M.S., University of Delaware

Prasadarao V. Kakumanu (1978)
Associate Professor of Business Administration (1978)
B.S., Andhra University;
M.S., Patna University;
M.A., Delhi University;
Ph.D., Cornell University

Thomas A. Kamla (1978)
Associate Professor of Foreign Languages/Fine Arts (1981)
Chairman, Department of Foreign Languages/Fine Arts (1981)
B.A., St. John's University, Minnesota;
M.A., Ph.D., University of Wisconsin

William E. Katorkas, D. Et U.* (1954)
Assistant Professor of Business Administration (1961)
B.S., University of Scranton;
M.B.A., New York University

Robert A. Keenan (1979)
Major, U.S. Army
Assistant Professor of Military Science (1979)
B.S., University of New Hampshire

†Under special arrangements; actively teaching 1981-1982.

Raymond L. Kimble (1973)
Associate Professor of Reading (1973)
Chairman, Department of Education (1981)
B.S., Mansfield State College;
M.S., State University of New York at Cortland;
Ed.D., Arizona State University

Stephen L. Klingman (1973)
Assistant Professor of Physical Education (1977)
B.S., M.S., Ithaca College

Richard Klonoski (1981)
Lecturer in Philosophy (1981)
B.A., University of Scranton;
M.A., Kent State University
Ph.D. Cand., Duquesne University

M. Jane Kopas, O.S.F. (1978)
Assistant Professor of Theology/ Religious Studies (1978)
B.S., M.A., St. Bonaventure University;
Ph.D., Graduate Theological Union

Raymond G. Laverdiere (1979)
Assistant Professor of Business Administration (1979)
B.S., M.B.A., University of Rhode Island;
Cand. Ph.D., Pennsylvania State University

John J. Levko, S.J. (1979)**
Associate Professor of Mathematics (1979)
B.A., M.S., Ph.D., Lehigh University;
S.T.B., Gregorian University;
M.A., John XXIII Institute, Maryknoll;
Graduate Studies, Pontifical Oriental Institute, Rome, Italy

Frank J. MacEntee, S.J. (1965)
Professor of Biology (1973)
B.S., Spring Hill College;
M.S., Ph.D., The Catholic University of America

Francis Marino (1980)
Assistant Professor of Chemistry (1980)
B.S., M.A., University of Scranton;
M.S., Ph.D., University of Massachusetts

Michael Marino (1965)
Professor of Education (1970)
B.S., M.S., Brockport State College;
Ed.D., University of Buffalo

Thomas D. Masterson, S.J. (1976)
Assistant Professor of History (1976)
A.B., M.A., Fordham University;
Ph.L., S.T.B., S.T.L., Woodstock College;
M.A., Ph.D., Georgetown University

Christine E. McDermott (1979)
Assistant Professor of Biology (1979)
B.A., California State at Fresno;
Ph.D., University of Tennessee

John J. McGee (1977-78; 1979)
Instructor of Business Administration (1979)
B.S., Indiana University of Pennsylvania;
M.B.A., University of Scranton;
J.D., University of Louisville

John W. McGinley (1970)
Professor of Philosophy (1979)
Chairman, Department of Philosophy (1976; 1979)
A.B., College of the Holy Cross;
Ph.D., Boston College

Eugene A. McGinnis, D. Et U.* (1948)
Professor of Physics (1963)
B.S., University of Scranton;
M.S., New York University;
Ph.D., Fordham University

John M. McInerney (1966)
Professor of English (1977)
Chairman, Department of English (1981)
A.B., LeMoyne College;
M.A., Ph.D., Loyola University, Chicago

Robert L. McKeage (1974)
Assistant Professor in Business Administration (1978)
B.S., M.B.A., University of Scranton
M.A., Lehigh University

John P. McLean, D. Et U.* (1940)
Professor of Business Administration (1972)
Alperin Chair of Management
(Gift of Joel M., Irwin and Myer Alperin)
B.S., University of Scranton

Marianne McTighe, D. Et U.* (1946)
Associate Librarian (1970)
B.S., M.A. in L.S., Marywood College

John G. Meinke (1976)
Assistant Professor of Mathematics/ Computer Science (1978)
B.A., Ed.M., State University of New York at Buffalo;
M.A.T., University of Montana;
M.S., Cand. Ph.D., Illinois Institute of Technology

Louis D. Mitchell (1961)
Professor of English (1972)
A.B., M.A., Fordham University;
Ph.D., New York University

Patrick Mohr, S.J. (1975)**
Associate Professor of Philosophy (1981)
B.A., M.A., Spring Hill College
Ph.D., Georgetown University

**On leave, 1981-82.

Francis J. Murray (1965)
Associate Professor of Physics (1977)
B.S., Iona College;
M.A., St. John's University;
Ph.D., New York University

John J. Murray, D. Et U.* (1957)
Professor of English (1968)
B.S., University of Scranton;
M.A., The Catholic University of America;
Ph.D., New York University

Hannah V. Natzke (1980)
Assistant Librarian II (1980)
B.A., Syracuse University;
M.S., Western Michigan University

Hong V. Nguyen (1979)
Assistant Professor of Business Administration (1979)
B.S., State University of New York at Brockport; M.A., State University of New York at Binghamton;
Ph.D., State University of New York

Kevin M. Nordberg (1970)
Associate Professor of Philosophy (1978)
A.B., Assumption College;
M.A., Ph.D., University of Notre Dame

Kevin R. Norris (1977)
Assistant Librarian II (1981)
B.S., M.L.S., University of Pittsburgh

Mildred A. Norton, D. Et U.* (1946)
Associate Librarian (1972)
B.S., M.S. in L.S., Marywood College

John J. O'Malley (1968)
Associate Professor of Psychology (1971)
Chairman, Department of Psychology (1978; 1981)
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The Bulletin of the University of Scranton is published by the University of Scranton and is issued once in March, once in April, once in June and once in August. Entered as second class matter at the Post Office of Scranton, Pennsylvania, August 17, 1951, under the authority of the Act of August 24, 1912, as amended August 4, 1947.

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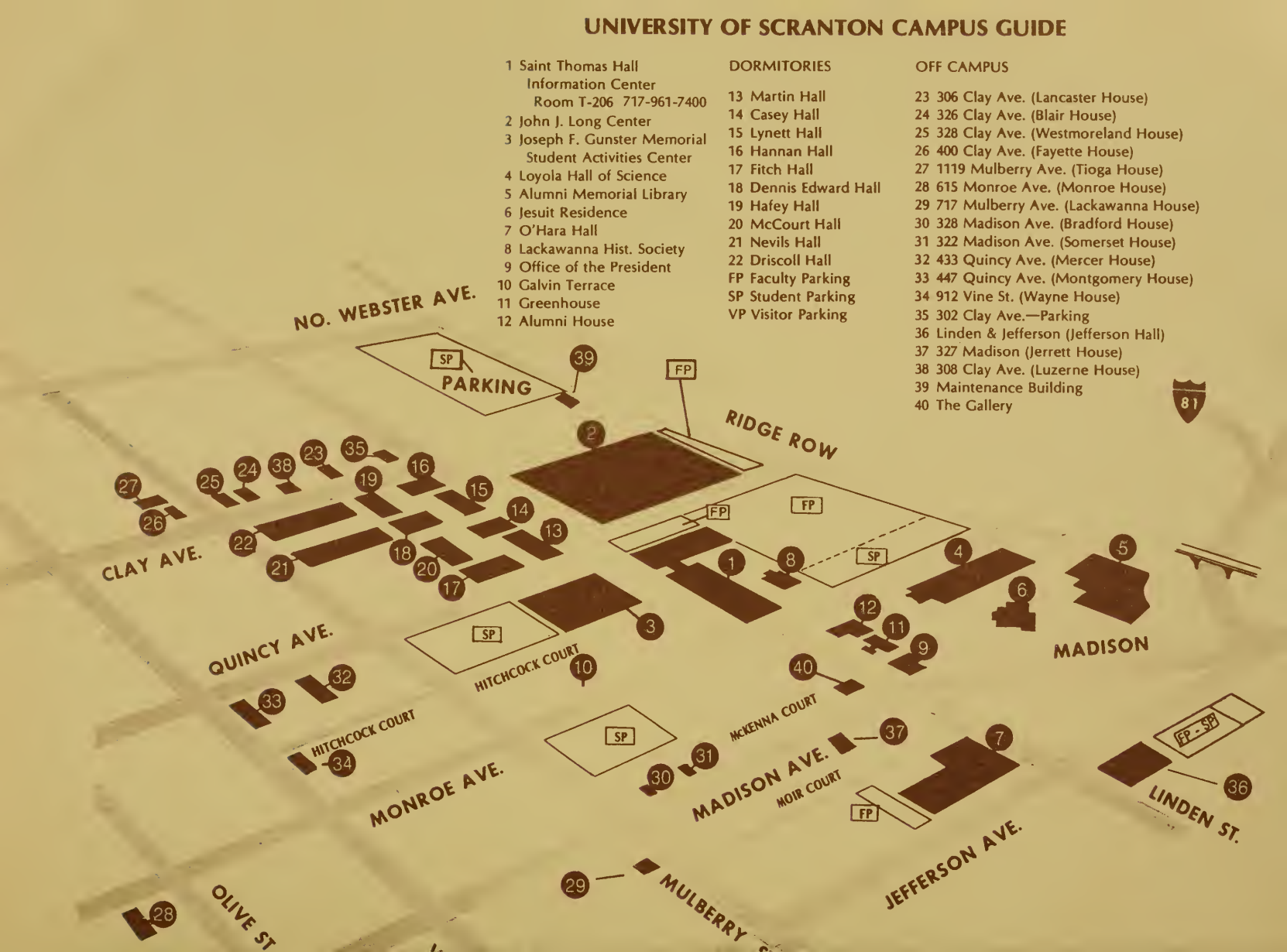

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